

THE STUDENTS' SERIES OF
HISTORICAL AND COMPARATIVE
GRAMMARS

EDITED BY JOSEPH WRIGHT

COMPARATIVE GRAMMAR OF THE GREEK LANGUAGE

BY

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‘Nur das Beispiel führt zum Licht;
Vieles Reden thut es nicht’

HENRY FROWDE
OXFORD UNIVERSITY PRESS
LONDON, NEW YORK AND TORONTO

1912

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OXFORD: HORACE HART
PRINTER TO THE UNIVERSITY

PREFACE

IN writing this Grammar I have followed as far as possible the plan adopted in the other Grammars of the Series, my object being to furnish students with a concise account of the phonology, word-formation, and inflexions of the language. As the book is not intended for specialists¹ some more or less important details have been intentionally omitted. This is especially the case in regard to those dialects which have been preserved in such scanty fragments as to render it impossible for us to give a full account of their phonology. It must not, however, be assumed that these dialects have been entirely omitted; on the contrary, I have made considerable use of them in the phonology and elsewhere, wherever they have helped to throw light upon the development and history of the other dialects, such as Attic, Ionic, Doric, Aeolic.

Much of the time and labour spent on this Grammar has been taken up with selecting examples from the vast amount of material which I had collected to illustrate the sound-laws of the various dialects. This selection was necessary if I was to keep steadily in view the class of students for whom the Series of Grammars was originally planned, otherwise it would have been far easier to produce a Comparative Greek Grammar at least three times the size of the present one. In spite of this great compression of the material, I venture to think that I have included within a modest compass all that the ordinary

¹ In Greek Philology.

student will require to know about the subject, and I believe that the student who thoroughly masters the book will not only have gained a comprehensive knowledge of Comparative Greek Grammar in particular, but will also have acquired the elements of the Comparative Grammar of the Sanskrit, Latin, and Germanic languages. Examples have been more copiously used from these than from the other branches of the Indo-Germanic family of languages, because it can be safely inferred that the students who study this Grammar will already possess a practical knowledge of one or more of them.

This Grammar makes no pretence whatever of being an original and exhaustive treatise on the subject. In a book of this kind there is practically no scope for a display of either of these features, but I have contrived to bring within a comparatively small space a great deal of matter which will be new to students, and especially to those who are unable to study the subject in works written in foreign languages. All that I have attempted to do is to furnish our countrymen with a systematic and scientific treatment of Comparative Greek Grammar based upon the philological books and articles of the best workers of the present day in the wide field of Comparative Philology. Specialists in the subject will accordingly find little that is new in the book.

In Greek as in all the other Indo-Germanic languages there are still innumerable points which have never been satisfactorily explained, and not a few points about which there is a great divergence of opinion even among the best philologists. In all such cases I have carefully considered the various explanations which have been proposed, and have given those with which I agreed without, as a rule,

stating my authority, but where I was unable to agree with any of the proposed explanations I have generally preferred to state that the phenomenon in question has never been satisfactorily explained or that the explanation is unknown, rather than burden the book with attempted explanations with which I did not agree. I have generally omitted to give the authorities for various statements made throughout the Grammar, except in special cases where I thought it desirable to refer the student for further information to the sources which deal more fully with the case in point.

I gratefully acknowledge the help I have derived from the learned books and articles by the splendid band of German Philologists who have done so much to throw light upon the history and philology of the various Indo-Germanic languages. On pp. xiv-xvii will be found a select list of the books and articles which I have found most useful in the writing of this book, but a mere place in a list would not adequately express my indebtedness to the works of Brugmann, Hirt, Gustav Meyer, Osthoff, Johannes Schmidt, and Wackernagel. In conclusion I wish to express my sincere thanks to the Controller of the University Press for his great kindness in complying with my wishes in regard to special type; to Mr. A. Davidson, for his valuable collaboration in the making of the index verborum; and lastly to the press-reader, Mr. W. F. R. Shilleto, for his invaluable help with the reading of the proofs.

JOSEPH WRIGHT.

OXFORD,
January, 1912.

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ABBREVIATIONS

abl.	= Ablative	Lat.	= Latin
Aeol.	= Aeolic	Lesb.	= Lesbian
Arcad.	= Arcadian	Lith.	= Lithuanian
Arm.	= Armenian	loc.	= locative
Att.	= Attic	Locr.	= Locrian
Balt.	= Baltic	ME.	= Middle English
Boeot.	= Boeotian	NE.	= New English
Cret.	= Cretan	NHG.	= New High German
Cypr.	= Cyprian	M.Ir.	= Middle Irish
dial.	= dialect(s	OE.	= Old English
Dor.	= Doric	OHG.	= Old High German
El.	= Elean	O.Icel.	= Old Icelandic
ep.	= epic	O.Ir.	= Old Irish
Germ.	= German	O.Lat.	= Old Latin
Goth.	= Gothic	OS.	= Old Saxon
Gr.	= Greek	Osc.	= Oscan
Heracl.	= Heraclean	O.Slav.	= Old Slavonic
Herod.	= Herodotus	Pamph.	= Pamphylian
Hesych.	= Hesychius	prim.	= primitive
Hom.	= Homer(ic	Skr.	= Sanskrit
Indg.	= Indo-Germanic	Thess.	= Thessalian
instr.	= instrumental	Umbr.	= Umbrian
Ion.	= Ionic	Ved.	= Vedic
Lac.	= Laconian		

The asterisk * prefixed to a word denotes a theoretical form, as $\hat{\eta}a$ from $*\hat{\eta}\sigma a$ = Indg. $*\acute{e}sm$; $\sigma\pi aip\omega$ from $*\sigma\pi aipj\omega$ = Indg. $*sprij\acute{o}$.

TRANSCRIPTION

IN the following remarks on transcription we shall only deal with such points as are likely to present a difficulty to the student who is unfamiliar with the transcription used throughout this Grammar.

Long vowels are generally indicated by -, as ā, ī, ū; nasal vowels by , as ą, ą; close vowels by . or ', as ę or è; vocalic liquids and nasals by ą, ą, ą, ą; ö = the ö in German **Götter**, and ü the ü in **Mütter**.

SANSKRIT:—ñ = the palatal, and ɳ the guttural ng-sound. j = the j in NE. just. The dot . is placed under a dental, n and š, to indicate the cerebral pronunciation of these consonants, as t̪, d̪, n̪, š̪. The combination explosive + h is pronounced as a voiceless or voiced aspirate according as the first element is voiceless or voiced, as th, ph, dh, bh. c = the ch in NE. church. š is the palatal and š the cerebral sh-sound. Final -h from older -s or -š = h in NE. hand.

PRIMITIVE GERMANIC:—In the writing of primitive Germanic forms the signs þ = the th in NE. thin; ð, ð the th in NE. then; þ = a bilabial spirant which may be pronounced like the v in NE. vine; ȝ = a voiced spirant, often heard in the pronunciation of German sagen; x = German ch and the ch in Scotch loch.

GOTHIC:—áí = the e in NE. get; áí = nearly the i in NE. five; aú = the o in NE. lot; áú = nearly the ou in NE. house; ei = ī like the ie in German sie and nearly like the ee in NE. feed. þ = the th in NE. thin; medially after vowels þ, ð = the v in NE. living and the th in then; medially between vowels ȝ = prim. Germanic ȝ, before another guttural it was pronounced like the n, ng in NE.

think, sing ; j = NE. y in *you*; initially before and medially between vowels h = the h in NE. *hand*, but in other positions it was like the ch in Scotch *loch*; hr = the wh in the Scotch pronunciation of *when*; q = the qu in NE. *queen*.

LITHUANIAN:—e = the e in NE. *get*; ē = long close ē like the first e in German *leben*; o = long close ö like the o in German *Bote*; ē = the diphthong ię or ia; ū = the diphthong uę or ua; y = i like the ie in German *sie* and nearly like the ee in NE. *feed*. j = the y in NE. *you*; ž = the s in NE. *measure* and the j in French *jour*; c = the ts in NE. *cats*; cz = the ch in NE. *church*; sz = the sh in NE. *ship*.

OLD SLAVONIC:—ě = a long close ē like the first e in German *leben*, but in some positions it was probably a diphthong ia or ea; ī = a very close e nearly like the é in French *été*; ū = a very close o or ö; y was probably an unrounded u-sound. j = the y in NE. *you*; c = the ts in NE. *cats*; č = the ch in NE. *church*; ch = the ch in Scotch *loch*.

INTRODUCTION

§ 1. Greek forms one branch of the Indo-Germanic family of languages. This great family of languages is usually divided into eight branches :—

I. **Aryan**, consisting of : (1) The Indian group, including Vedic (the language of the Vedas), classical Sanskrit, and the Prākrit dialects. The oldest portions of the Vedas date at least as far back as 1500 b. c., and some scholars fix their date at a much earlier period, see Winternitz, *Geschichte der indischen Litteratur*, pp. 246–58. (2) The Iranian group, including (a) West Iranian (Old Persian, the language of the Persian cuneiform inscriptions, dating from about 520–350 b. c.) ; (b) East Iranian (Avesta—sometimes called Zend-Avesta, Zend, and Old Bactrian—the language of the Avesta, the sacred books of the Zoroastrians).

II. **Armenian**, the oldest monuments of which belong to the fifth century A. D.

III. **Greek**, with its numerous dialects (§ 2).

IV. **Albanian**, the language of ancient Illyria. The oldest monuments belong to the seventeenth century.

V. **Italic**, consisting of Latin and the Umbrian-Samnitic dialects. From the popular form of Latin are descended the Romance languages : Portuguese, Spanish, Catalanian, Provençal, French, Italian, Raetoromanic, Roumanian or Wallachian.

VI. **Keltic**, consisting of : (1) Gaulish (known to us by Keltic names and words quoted by Latin and Greek authors, and inscriptions on coins) ; (2) Britannic, including Cymric or Welsh, Cornish, and Bas Breton or Armorican (the

oldest records of Cymric and Bas Breton date back to the eighth or ninth century); (3) Gaelic, including Irish-Gaelic, Scotch-Gaelic, and Manx. The oldest monuments are the Old Gaelic ogam inscriptions which probably date as far back as about 500 A. D.

VII. Germanic, consisting of:—

(1) Gothic. Almost the only source of our knowledge of the Gothic language is the fragments of the biblical translation made in the fourth century by Ulfilas, the Bishop of the West Goths.

(2) **Scandinavian or North Germanic**, which is subdivided into two groups: (a) East Scandinavian, including Swedish, Gutnish, and Danish; (b) West Scandinavian, including Norwegian, and Icelandic.

The oldest records of this branch are the runic inscriptions, some of which date as far back as the third or fourth century.

(3) **West Germanic**, which is composed of:—

(a) High German, the oldest monuments of which belong to about the middle of the eighth century.

(b) Low Franconian, called Old Low Franconian or Old Dutch until about 1200.

(c) Low German, with records dating back to the ninth century. Up to about 1200 it is generally called Old Saxon.

(d) Frisian, the oldest records of which belong to the fourteenth century.

(e) English, the oldest records of which belong to about the end of the seventh century.

VIII. Baltic-Slavonic, consisting of: (1) The Baltic division, embracing (a) Old Prussian, which became extinct in the seventeenth century, (b) Lithuanian, (c) Lettic (the oldest records of Lithuanian and Lettic belong to the sixteenth century); (2) the Slavonic division, embracing: (a) the South-Eastern group, including Russian (Great

Russian, White Russian, and Little Russian), Bulgarian, and Illyrian (Servian, Croatian, Slovenian); (b) the Western group, including Czech (Bohemian), Sorabian (Wendish), Polish and Polabian. The oldest records (Old Bulgarian, also called Old Church Slavonic) belong to the second half of the ninth century A.D.

§ 2. The oldest Greek records exhibit clearly defined dialectal peculiarities which have been treated in some detail in the phonology and accidence of this book. For a detailed account of the Greek dialects and of the literature on the subject see Thumb, *Handbuch der griechischen Dialekte* (1909).

It is to Greek inscriptions that we must look for the purest forms of the various dialects. The literary language, especially that of the poets, is in many respects artificially constructed. Towards the end of the fifth century B.C. was gradually formed on the basis of the Attic dialect a literary language common to all Greeks, which almost entirely excluded the use of the other dialects from the later prose literature of antiquity. In this grammar Attic is taken as the standard and is treated in greater detail than the other dialects. It was formerly the custom to divide the Greek dialects into three groups:—Ionic-Attic, Doric, and Aeolic. This threefold division was both unsatisfactory and unscientific, because Aeolic was made to embrace all Greek dialects which were not either Ionic-Attic or Doric, whereas strictly speaking Aeolic proper only embraces the North-East group of dialects. The only really scientific classification of the dialects must be based on the lexicographical and grammatical peculiarities as exhibited on the oldest inscriptions. In this manner Greek can be conveniently divided into the following dialects or groups of dialects:—

I. **Ionic-Attic:** (1) Ionic including the dialects of (a) The central portion of the West Coast of Asia Minor together

with the islands of Chios and Samos; (b) The Cyclades: Naxos, Ceos, Delos, Paros, Thasos, Siphnos, Andros, Ios, Myconos; (c) Euboea. (2) The dialect of Attica.

II. **The Doric group** including the dialects of (1) Laconia together with the dialects of Tarentum and Heraclea; (2) Messenia; (3) Argolis and Aegina; (4) Corinth together with Corcyra; (5) Megara together with Byzantium and Selinus; (6) The Peloponnesian colonies of Sicily; (7) Crete; (8) Melos and Thera together with Cyrene; (9) Rhodes together with Gela and Acragas; (10) The other Doric islands in the Aegean: Anaphe, Astypalaea, Telos, Nisyros, Cnidos, Calymna, Cos, &c.

III. **The dialect of Achaia and its colonies.**

IV. **The dialect of Elis.**

V. **The North-West group** including the dialects of (1) Epirus, Acarnania, Aetolia, Phthiotis and of the Aenianes; (2) Locris and Phocis including Delphi.

VI. **The Arcadian-Cyprian group** including the dialects of (1) Arcadia; (2) Cyprus.

VII. **The North-East or Aeolic group** including the dialects of (1) Lesbos and the coast of Asia Minor adjoining; (2) Thessaly except Phthiotis; (3) Boeotia.

VIII. **The dialect of Pamphylia.**

PHONOLOGY

CHAPTER I PRONUNCIATION

§ 3. The account of Greek pronunciation given below is only approximately accurate. It is impossible to ascertain with perfect certainty the exact pronunciation of any language in its oldest period. The Greek letters had not always the same sound-value in all the dialects, and at different periods the same letter was often used to express different sounds. Many examples of this kind will be found in the phonology. For a detailed account of Greek pronunciation see Blass, *Über die Aussprache des Griechischen*, third edition (1888); and for the history of the alphabet see Kirchhoff, *Studien zur Geschichte des griechischen Alphabets*, fourth edition (1887), and Giles, *Manual of Comparative Philology*, second edition (1901), pp. 517-22, where other literature on the subject will also be found.

A. THE VOWELS.

§ 4. α , ι , ν were used to express both short and long vowels. When long they are expressed in this grammar by $\bar{\alpha}$, $\bar{\iota}$, $\bar{\nu}$. ϵ , \circ were short, the corresponding long of which were expressed by η , ω .

§ 5. α had approximately the same sound as in German *Mann*, *Gast*, and northern English dial. *lad*, as $\grave{\alpha}\gamma\rho\sigma$, $\tau\acute{\iota}\mu\acute{\alpha}\omega$, $\delta\acute{\alpha}\kappa\rho\nu$, $\bar{\o}\delta\alpha$; $\pi\acute{\alpha}\tau\acute{\eta}\rho$, $\sigma\tau\alpha\tau\acute{\circ}s$; $\delta\acute{e}ka$, $\tau\alpha\tau\acute{o}s$; $\beta\acute{a}\lambda\lambda\omega$, $\pi\lambda\alpha\tau\acute{u}s$; $\theta\acute{a}\rho\sigma\circ s$, $\acute{\epsilon}\delta\rho\alpha\kappa\circ v$.

ᾳ had the same sound as the a in English *father*, as τιμᾶτε, μέλας, χώρα, Dor. ἄδυς, μάτηρ, τιμᾶ.

§ 6. ε was a close vowel in Attic and Ionic like the é in French *été*, as ξέω, φέρω, οἶδε. That ε was close in these dialects is shown by the contraction of εε to ει (§ 12) in words like φιλεῖτε from φιλέετε. In Aeolic and some Doric dialects the ε was open, hence the contraction of εε to η in words like φίλη, ἡχον=Att. φίλει, εἵχον; and it must also have been open in Elean and Locrian where ε partly became α (§ 44, note 2).

η was an open vowel like the ai in English *air* and the è in French *père*, as Ζῆν, τίθημι, εἴης; Att. Ion. μήτηρ, ἔφηνα, σελήνη beside Dor. μάτηρ, ἔφανα, σελάνα. The η from olderᾳ was originally more open than the η=Indg. ē, the former was written H and the latter E on old Ionic inscriptions, but the two sounds fell together in Attic in the fifth century B. c., see §§ 50, 51.

§ 7. It cannot be determined whether ι was an open vowel like the i in English *bit* or a close vowel like the i in French *fini*, as ίμεν, πόλις, τρισί.

ι was probably close like the ie in German *Vieh* (=fi), and nearly like the ee in English *see*, as ίμας, πιθι, πιῶν, κλίνω.

§ 8. ο was a close vowel which is common in some English dialects in such words as *coal* (kól), *foal* (fól), and in the final syllable of such words as *fellow* (feló), *window* (windó). It corresponded in quality but not in quantity to the o in German *Bote* (bótə), as ὀκτά, πότερος, πρό. That ο was close in Attic and Ionic is shown by the contraction of oo to ου (§ 17) in words like δηλοῦμεν from δηλόμεν.

ω was an open vowel like the au in English *aught*, as δίδωμι, δώτωρ, φέρω.

§ 9. In Attic, Ionic and probably also in some other dialects υ (=ü) had the same sound as the u in French tu, as ἐρυθρός, ζυγόν, μέθυ. The original u-sound (=the u in

English full) remained in Laconian, Boeotian, Lesbian, Thessalian, Arcadian, Cyprian and Pamphylian, but was generally written *ov* (see § 47, note 1).

$\bar{u}=\bar{u}$ in those dialects which changed short *u* to \ddot{u} , as *έφυτον*, *θῦμός*, *μῆς*.

§ 10. The short diphthongs *ai*, *ei*, *oi*; *av*, *ev*, *ov*; *ui=a*, *o+i*; *a*, *e*, *o+v*; *v+i*, but the original *u* quality was preserved in the second element of the *u*-diphthongs.

§ 11. *ai* was nearly like the *i* in English *five*, as *αιθω*, *φέρεται*; *βαίνω*, *τέκταινα*.

§ 12. *ei* (=Indg. *ei*, § 58) had nearly the same sound as the *ai* in English *stain* until about the beginning of the fifth century B.C., it then became long close \bar{e} in Attic, Ionic and the milder Doric dialects, although the *ei* was retained in writing, as *εἰσι*, *λείπω*, *πείθω*; *κτείνω*, *φθείρω*. The *ei* was then used to express the long close \bar{e} which arose from contraction and from compensation lengthening, as *φίλει*, *τρεῖς*, *εἶχον* from *φίλεε*, **τρέγες*, **έ-εχον*; *εῖς*=Cret. *ἔνς*, *τιθεῖς*, *χαρίεις* from **τιθεντς*, **χαριφεντς*; this *ei* was written *e* on the oldest Attic inscriptions, whereas prim. Greek *ei* was always written *ei*.

§ 13. *oi* had the same sound as the *oy* in English *boy*, as *οἴδα*, *φέροιμεν*, *λύκοι*.

§ 14. *ui=üi* (see *v* above) was a special Greek development and arose partly from the loss of an intervening consonant and partly from contraction, as *ἰδνία*, *νίος* from **γιδνυσία*, **σνιγός*, loc. sing. Hom. *πληθυῖ*.

§ 15. *av* had the same sound as the *au* in German **Haus**, and was nearly like the *ou* in standard English **house**, as *αὐξάνω*, *ταῦρος*.

§ 16. *ev* had approximately the same sound as is often heard in the southern English dialect pronunciation of **house** (*eus*), **mouse** (*meus*), as *γεύω*, *πεύθοματ*, *Ζεῦ*.

§ 17. *ov* (= Indg. *ou*, § 62) = *o+v* (see *o* above) until the fifth century B.C., it then became long close \bar{u} through the

intermediate stage of long close ō, although the *ov* was retained in writing. The *ov* was then used to express the long close ū later ū which arose from contraction and compensation lengthening, as *νοῦς*, λύκου, δηλοῦμεν, from *νόος*, &c.; *δουρός* from **δορφός*; φέρουσι = Dor. φέροντι, λύκους = Cret. λύκονς, δίδούς from **δίδοντς*; this *ov* was written *o* on the oldest Attic inscriptions, whereas prim. Greek *ov* was always written *ov*.

§ 18. The original long diphthongs āi, ēi, ōi; āu, ēu, ūu became short before consonants already in prim. Greek, as in δραῖμεν, γραφεῖμεν, λύκοις; ναῦς, Ζεύς, βοῦς, from *δρᾶιμεν, &c. (§ 63). The second element of the long final diphthongs -āi, -ēi, -ōi ceased to be pronounced in the second century B.C., and in ηι probably much earlier. The modern mode of writing these diphthongs as *ᾳ*, *ῃ*, *ῳ* (*θῃ̄*, χώρᾳ, τῆμῇ, λύκῳ) only dates back to manuscripts of the twelfth century.

B. THE CONSONANTS.

§ 19. The voiceless explosives π, τ, κ, the voiced explosives β, δ, the nasals μ, ν and the liquid λ had approximately the same sound-values as in English. The remaining consonants require special attention.

§ 20. In the oldest period of the language γ was in all positions a voiced explosive like the *g* in English *go* or *ago*, as γένος, γυνή, ἀγρός, ἀμέλιγω, ὀλίγος, but already at an early period it became a voiced spirant in the popular dialect medially between vowels. The guttural nasal η (=the *n* in English *think* and the *ng* in *sing*) was expressed by ν on the oldest inscriptions, but after the combinations γν, γμ had become ην, ημ in such words as γίγνομαι, ἀγμός (§ 155), it came to be expressed by γ, as ἀγγελος, ἀγκάν, ἀγχω, σφίγξ.

§ 21. In the earliest historic period of the language ζ was a compound consonant like the *zd* in English *blaz(e)d*

and arose from older *dz* by metathesis (§ 129, 8), as *ζυγόν*, *Ζεύς*, *ἐλπίζω*, *πεξός*, *ἄξομαι*. The *dz* must have become *zd* before the *v* disappeared in words like *Ἄθήναζε* from **Ἄθάναντζ-δε* (§ 153); cp. also forms like *διόξοτος*, *θεόξοτος* beside *διόσδοτος*, *θεόσδοτος*. *ζ* probably became *z* in Attic some time during the fourth century B.C. Some scholars assume that *ζ* was pronounced like the *s* (= *ž*) in English **measure, pleasure** already in the earliest period of the language.

§ 22. *p* had a strong trill formed by trilling the point of the tongue against the gums. It was voiceless initially (written *ρ̄*, see § 215), and medially after *φ*, *θ*, *χ* and probably after all other voiceless consonants. In other positions it was voiced like the Scotch *r* in **hard, bearing, bear**, as *ἐρυθρός*, *φέρω*, *ἄγρός*, *ἔαρ*.

§ 23. *σ* was voiced (= *z*) before voiced explosives, as *πρέσβυς*, *σβέννυμι*, *διόσδοτος*, *μίσγω*, but voiceless in other positions, as *στατός*, *θάρσος*, *λύκος*. It is doubtful how the Ionic *-σσ-* and Attic, Boeotian, Thessalian and Cretan *-ττ-* were pronounced in such words as Ion. *πίσσα*, *θάσσων*, *πρήσσων* beside Attic, &c. *πίττα*, *θάττων*, *πράττων* (cp. § 129, 7). Some scholars assume that the *-σσ-*, *-ττ-* was like the *th* in English **thin** or a kind of lisped *s*, whilst others think that the sound was the same as the *sh* in English **she**.

§ 24. *φ*, *θ*, *χ* were aspirated voiceless explosives like the *p*, *t*, *k* in German **paar**, **teil**, **kein** and in the Anglo-Irish pronunciation of **pair**, **tell**, **kill**, as *φέρω*, *νέφος*, *δρόῦς*; *θερμός*, *πείθω*, *τίθημι*, *οἰσθα*; *χειμών*, *λείχω*, *ἄγχω*. *θ* became a spirant (= *th* in English **thin**) at an early period in some dialects. *φ* and *χ* also became spirants later, but *φ*, *θ*, *χ* must have been aspirated voiceless explosives at the time de-aspiration took place, cp. *πέφενγα*, *τρέφω*, *κέχυκα*: *φεύγω*, *θρέψω*, *χέω* (§ 115); and also when *π*, *τ*, *κ* became aspirated before a following rough breathing, cp. *ἀφ' ὥν*, *ἀνθ' οὐ*, *οὐχ ὅπως*.

§ 25. ξ , ψ probably represented the combinations $\kappa\varsigma$, $\pi\varsigma$ (often written $\chi\varsigma$, $\phi\varsigma$), as $\xi\xi\omega$, $\lambda\xi\omega$, $\gamma\rho\acute{\alpha}\psi\omega$, $\lambda\epsilon\psi\omega$.

§ 26. The spiritus asper ' corresponded to the English **h** in **house**, and was originally represented by **H**. It disappeared in the prehistoric period in Lesbian, Elean, the dialect of Gortyn, and the Ionic of Asia Minor. **H** then came to be used in Ionic to represent the \bar{e} from older \bar{a} (§ 51). At a later period the **H** was halved **†**, **‡**, and the former was used for the spiritus asper and the latter for the lenis. From these fragments came the later signs ' and '.

§ 27. On **f** and **φ** see § 120 and § 47, note 2.

ACCENT.

§ 28. By accent in its widest sense is meant the gradation of a word or word-group according to the degree of stress or of pitch with which its various syllables are uttered. Although strictly speaking there are as many different degrees of accent in a word or word-group as there are syllables, yet for ordinary purposes it is only necessary to distinguish three degrees, the principal accent, the secondary accent, and the weak accent or as it is generally termed the absence of accent. The secondary accent is as a rule separated from the principal accent by at least one intervening syllable.

All the Indo-Germanic languages have partly pitch (musical) and partly stress (expiratory) accent, but one or other of the two systems of accentuation always predominates in each language, thus in Greek and Vedic the accent was predominantly pitch, whereas in the oldest periods of the Italic dialects, and the Keltic and Germanic languages, the accent was predominantly stress. The effect of this difference in the system of accentuation is clearly seen by the preservation of the vowels in unaccented syllables in the former languages and by the weakening or loss of them in the latter. In the early period of the

parent Indg. language, the stress accent must have been more predominant than the pitch accent, because it is only upon this assumption that we are able to account for the origin of the various phenomena of quantitative ablaut (§§ 86–90). It is now a generally accepted theory that at a later period of the parent language the system of accentuation became predominantly pitch with which was probably connected the origin of qualitative ablaut (§ 83). This pitch accent was preserved in Greek and Vedic, but became predominantly stress again in the primitive period of nearly all the other languages. It had also become predominantly stress in Greek by about the beginning of the Christian era, see Kretschmer, *Kuhn's Zeitschrift*, xxx, pp. 591–600.

§ 29. The quality of the prim. Indg. syllable-accent was of two kinds, the 'broken' or acute and the 'slurred' or circumflex. The former was a rising and the latter a rising-falling accent. Long vowels with the acute accent were bimoric and those with the circumflex trimoric. All original long vowels including the first element of long diphthongs had the acute accent. The circumflex accent was unoriginal and arose in prim. Indo-Germanic in the following manner :—(a) From the contraction of vowels, as *-ās* from *-ā-es* in the nom. pl. of *ā*-stems, *-ōs* from *-o-es* in the nom. pl. of *o*-stems, *-ōi* from *-o-ai* in the dat. sing. of *o*-stems, cp. $\theta\epsilon\hat{\omega}$, see § 79. The circumflex also arose by vowel contraction within Greek itself, as *τρē̄s* from **τρέ̄jes*, *ἡχō̄s* from **ἡχό̄bos*, *φορē̄te* from **φορέ̄ε̄te*, *φορō̄* from **φορέ̄ω*. (b) When a short vowel disappeared after a long vowel, as in gen. sing. *θeās* from an original form **dhwesāsso* (cp. § 92 (a)), cp. also *ναūs* from an original form **nāwos* beside *Zeūs* from **djéwos*. (c) When a medial long diphthong lost its second element, as in acc. sing. *βāv*, Vedic *gām* (= metrically gaam), *Zῆv*, Vedic *dyām* (= metrically dyaam), from **gō̄m*, **djem*, older **gō̄um*, **djéum*. The

same change from the acute to the circumflex accent also took place in prim. Indo-Germanic when a nasal or liquid disappeared after a long vowel, as Lith. *akmū* (= ·ō), *stone* beside ḥγεμών; Goth. *tuggō* (= ·ō), *tongue* beside *hana* (= ·ōn or ·ēn), *cock*; Lith. *motē* (= ·ē), *wife* beside πατήρ. This distinction in the quality of the accent was preserved in final syllables containing a long vowel in Greek, Vedic, Lithuanian, and in the oldest periods of the Germanic languages. The old inherited difference in the quality of the syllable-accent was also preserved in Greek in final syllables which had not the principal accent, cp. loc. sing. οἴκοι, φερομένοι beside Ἰσθμοῖ and nom. pl. οἶκοι, φερόμενοι beside ισθμοί, θεοί; opt. λείποι, cp. Lith. *te-sukē*, *he shall turn*. The circumflexed trimoric and the acuted dimoric short diphthongs of final syllables had each lost a mora in prim. Greek before the trisyllabic law came into operation (§ 30).

§ 30. The word-accent in the parent Indg. language was free or movable, that is its position was not determined either by the number or the length of the syllables which a word contained. This freedom in the position of the principal accent of a word was better preserved in Vedic than in any of the other Indg. languages. The free accent was still preserved in prim. Germanic at the time when Verner's Law operated, whereby the voiceless spirants became voiced when the vowel immediately preceding them did not bear the principal accent of the word (§ 100, note 4). At a later period of the prim. Germanic language, the principal accent became confined to the first syllable of the word. And in like manner the principal accent of the word became confined to the first syllable in prim. Italic and Keltic, for the further history of the principal accent in these branches see Brugmann, *Grundriss, &c.*, vol. i, second ed., pp. 971–80.

The word-accent became restricted in its freedom in

prim. Greek by the development of the so-called trisyllabic law whereby the principal accent could not be further than the third syllable from the end of the word nor further than the second syllable when the last syllable was originally long, as ἀπότισις from *ἀποτισις: Skr. ápa-citiḥ, φερόμενος, φερομένοιο from *φέρομενος, *φέρομενοιο: Skr. bháramāṇaḥ, bháramāṇasya, γενέων from *γένεσων: Skr. jánasām, ḥdīwān: Skr. svádiyān, ḥdīwā from *σταδί-joṣa, cp. Skr. svádiyāsam. Words of the type πόλεως from older πόλης by quantitative metathesis (§ 72) are not exceptions to the above law, which was older than the change of ηο to εω. At the time when this new system of accentuation came into existence the original trimoric long vowels and short diphthongs and the original bimoric short diphthongs -oi, -ai, -ei had each lost a mora (§ 29), cp. γενέων from Indg. *génēsōm, loc. sing. φερομένοι beside nom. pl. φερόμενοι; φέρεσθαι, φέρομαι.

The new system of accentuation was also extended to polysyllabic enclitic words in which more than the two or respectively three last morae were unaccented, as πότερος, ποτέροιο from *^Lποτερος, *^Lποτεροιο, ḥμων, ḥmīn from *^Lἥμων, *^Lἥμīn (cp. μου, μοι); λίπωμεν, δέδορκα from *λι-πωμεν, *^Lδέδορκα (§ 38).

NOTE.—In the Lesbian dialect the accent was in all cases thrown as far back as the trisyllabic law would permit, as βαστλευς, ἔρυθρος, θῦμος, Ζεύς, πόταμος, σόφος=Att. βασιλεύς, ἔρυθρός, θῦμός, Ζεύς, ποταμός, σοφός. For peculiarities of the Doric dialect see § 38, note.

§ 31. In words ending in a trochee with a long vowel or a diphthong in the penultimate, the highest pitch went from the second mora of the syllable to the first, as ḥμα from *ἥμα, νῆες from *νάϝες, hence also ἐστῶτες from ἐσταότες.

§ 32. Dactylic oxytona or oxytona ending in a dactyl

became paroxytona, as ἀγκύλος, αἰόλος, βοηδρόμος, γομφίος, θηρίον, καμπύλος, λογογράφος, ὄφρύος, ποικίλος, τελεσφόρος, beside αἴγοβοσκός, παχυλός, &c. This law has numerous exceptions owing to analogical formations, as δημοβόρος, αἰσχρολόγος after the analogy of forms like τελεσφόρος; ἀριστερός after δεξιτερός; αἱρετός, αἱνετός after μενετός, &c.; λελυμένος, τεταμένος after πεπληγμένος, πεφυγμένος.

§ 33. But apart from the above changes and analogical formations like χρῦσοῦς for *χρύσους after the analogy of χρῦσοῦ, -ῷ, and conversely εὔνου, -ῳ for *εὔνοῦ, -ῷ after εὔνους; τιθεῖσι, διδοῦσι for *τίθεισι, *δίδοῦσι after ιστᾶσι from *ιστάσι (§ 43θ); ἐμός, τεός, ἔός for *ἔμος, *τέος, *ἔος after *μός, σός, fós, the original Indg. accent generally remained in Greek when it did not come in conflict with the trisyllabic law, cp. γένος, γένεος: Skr. jánaḥ, jánasah, μέθυ: Skr. mādhu, θύγατερ: Skr. dūhitar, φράτορες: Skr. bhrātaraḥ, oñthar: Skr. ūdhar, dōtwar: Skr. dātā, πατήρ, πατέρα, πατράσι: Skr. pitā, pitáram, pitřšu, Dor. πώς, ποδός, ποσí: Skr. pát, padáḥ, patsú, γενετήρ: Skr. janitā, κλυτός: Skr. śrutáḥ, ēruθrós: Skr. rudiráḥ, βαρύς: Skr. gurúḥ, ὥκν: Skr. āśúḥ, ēptá: Skr. saptá, &c.

§ 34. As we have already seen (§ 28) there are strictly speaking as many grades of accent in a word as there are syllables. In Greek the principal accent of a word was indicated by the acute or circumflex and all other syllables were regarded as unaccented. And as papyri show an attempt was sometimes made to indicate such syllables by the grave accent, as in θὲόσδδτὸς. But in ordinary Greek the grave accent became restricted to final syllables and merely denoted the absence of accent as contrasted with the acute, as ἀνδρὶ τούτῳ, περὶ τούτου beside τούτου πέρι.

§ 35. In sentence-accent we have to do with the accentual relations between the various members of a sentence or word-group. No word of whatever part of speech was

originally always accented in every position in the sentence. Any word could under certain conditions lose its independent accent and thus become enclitic. Certain particles were always enclitic already in the parent Indg. language, as *qe = τε, Skr. ca, Lat. que, *ge in ἐμέ·γε = Goth. mi·k, OE. me·c, *de in οἰκόν·δε, &c. The original distinction between the accented and unaccented forms of the pronouns was still preserved in the oldest periods of the separate Indg. languages and in many of these languages it has been preserved down to the present day (§§ 397 ff.).

§ 36. The vocative was originally partly accented and partly enclitic or unaccented. It was accented at the beginning of a sentence and unaccented in other positions. The accented form became for the most part generalized in prim. Greek and thus came to have the same accentuation as the nominative. Vocatives like ἀδελφε, θύγατερ, πόνηρε, μόχθηρε, Ἀγάμεμνον probably represent the original forms *ἀδελφε, *θυγατερ, &c., cp. πότερος from *ποτερος (§ 30), and that forms like Ζεῦ = Ζέν, πάτερ, ἀνερ for *Ζευ, *πατερ, *ἀνερ were accented after the analogy of the trisyllabic forms which were subject to the trisyllabic law. In Vedic the accent was always thrown back on to the first syllable when the sentence began with the vocative, as ágnē, dēvi, vādhu, pítar, beside nom. agníḥ, fire, dēvī, goddess, vadhuḥ, woman, pitá, acc. pitáram, father.

§ 37. When one word defined another more closely in compounds the first element was generally accented and the second became enclitic, as ἀνά·βασις, ἔν·υπνος, παρά·παν, πρό·δοσις, ὑπέρ·μορον, cp. Lat. dénuo = dē novō; ἀ·δωρος, ἀ·λυτος, ἀ·φθιτος, cp. OE. ún·cūþ, unknown; Νεά·πολις, πάμ·παν, cp. Lat. decém·virī; ἔν·δεκα, δώ·δεκα = Skr. dvá-dásā, ékatómu·bhī, δί·φρος; Διόσ·κουροι, Διόσ·δοτος, Ἐλλήσ·ποντος.

§ 38. In prim. Indo-Germanic the finite forms of the

verb were partly accented and partly enclitic. But when the one and when the other form was used, it is impossible to determine for all cases because the original system of verbal accentuation has not been preserved in the historic period of any of the languages. It was best preserved in Vedic in which the finite forms of the verb were always accented in subordinate sentences and at the beginning of principal sentences, but unaccented in all other positions, cp. *yádi pragáchhati*, *if he goes forward*, *āpnōti imá lōkám*, *he obtains this world*, beside *prá gacchati*, *he goes forward*, *ní padyatē*, *he lies down*, *á-bharam* = ἔ-φερον, but the fixed rule that the finite forms were always accented in subordinate sentences, independently of their position in the sentence, was doubtless a special development within Vedic itself. The original rule in the parent Indg. language probably was that the finite forms were accented when they began the sentence, but unaccented when they came after the subject. But after negatives and other adverbs including the augment, they were partly accented and partly unaccented. The type *oū φημι*, *ἀπό-λαβε*, *πρόσ-λαβε*, *ἔ-λαβον* was probably the rule at the beginning of the sentence, and also after unaccented words, as *παρ-έ-κδος*, *συμ-πρό-εσ*, *παρ-έ-σχον*, *προσ-έ-χον*.

The original rule that the finite forms were accented when they began the sentence was preserved in Greek in a few aorist imperatives like *εἰπέ*, *ἐλθέ*, *εὑρέ*, *λαβέ* (§ 540) beside *ἄπειπε*, *ἄπελθε*, *ἔξευρε*, *ἀπόλαβε*, and such imperative forms became generalized for all positions in the sentence, cp. also aor. mid. imperatives like *λαβοῦ*, *λιποῦ*, &c. In other respects it became the rule in prim. Greek to throw back the accent of the finite forms as far as was permitted by the trisyllabic law, as *ἔφερον*, *φέρουστ*, *φερόμεθα*, *ἔφερόμεθα*, *ἐλιπόμην*; *ἴμεν*, *ἴδμεν* (*ἴσμεν*), *δίδομεν*, *δέδορκα* for older **ιμέν*, **φιδμέν*, **διδμέν*, **δεδόρκα* = Skr. *imáḥ*, *vidmá*, *da-d-máḥ*, *dadárśa*; *λίπον*, *λίπομεν* for

older *λιπόν, *λιπόμεν, &c. The original unaccented or enclitic forms then came to be accented after the analogy of the original accented forms. The original accented and unaccented forms were preserved side by side in εῖ, ἔστι, φῆς beside εἰμὶ, ἔστι, φημὶ, φησὶ, &c.

NOTE.—Doric had a processive accent both in verbs and nouns as compared with Attic, as ἐλάβον, ἐλύσαν, ἔστάσαν, ἔφιλάθεν = Att. ἐλαβον, ἐλύσαν, ἔστησαν, ἔφιληθεν; ἀγγέλοι, αἴγες, ἀνθρώποι, φιλοσόφοι = Att. ἄγγελοι, αἴγες, ἀνθρωποι, φιλόσοφοι.

§ 39. Oxytona preserved their accent in pausa, but otherwise became proclitic, as ἀνδρὶ τούτῳ. The only exception is the interrogative pronoun τίς which always preserved its accent.

§ 40. The accented word in combinations consisting of an accented word and an enclitic preserved its original accentuation when the combination was in accordance with the trisyllabic law, as φίλος τις, πολλάκις γε, καλός τις, ἀγαθός τις, φῶς τε, πατήρ μου, τιμῆς τε, ἀγαθά τινα, καλός ἔστι, ποταροί τινες, αὐτός φησιν.

If the enclitic became accented by the trisyllabic law, the first word was accented in the same manner as it would be if followed by another originally accented word, as αὐτὸς πότερον, πατὴρ ἥμεων, &c. Forms like ἥκουσά τινων, παῖδες τινων, καλῶν τινων, &c. for *ἥκουσα τίνων, &c. were due to the analogy of ἥκουσά τινος, &c.; and conversely ἀλγεα ἥμιν for *ἀλγεά ἥμιν after the analogy of ἀλγεα ἥμιν.

In other cases where we should expect the original accentuation to be regulated by the trisyllabic law, we find nothing but deviations from the law. These deviations were due to the tendency in the language to preserve the position and individuality of the accent of the first word, and partly also to prevent two acutes following each other in successive syllables. The trisyllabic law only held good for

these combinations in so far as not more than two syllables were allowed to be unaccented after the principal accent :—

The first word, whether proparoxytone or properisponemon, got the acute accent on the final syllable in addition to its own accent, *ἄνθρωπόν τινα*, *ἄγγελός τις*, *πόλεμόν τινα*, *πρῶτός φησι*, *σῶμά τε*, *σῶμά που*, *σῶμά τινος*. This acute was the same which unaccented words had before enclitics, as *περί τε*, *ἄλλα τινες*, *εἴ που*, &c.

Paroxytona remained unchanged before monosyllabic enclitics containing a long vowel, as *ἄλλως πως*, *πολλάκις πως*.

Dissyllabic enclitics got a principal accent after paroxytona, as *φίλος ἐστί*, *τέχνης τινός*, *ἄλλων τινῶν*. This was the same accent which enclitics had at the beginning of a sentence, as *τινῶν μέν*. See Brugmann, *Griechische Grammatik*, pp. 157–9.

CHAPTER II

THE PRIMITIVE INDO-GERMANIC VOWEL-SOUNDS

§ 41. The parent Indo-Germanic language had the following vowel-system :—

Short vowels	a, e, i, o, u, ə
Long „	ā, ē, ī, ū, ū
Short diphthongs	ai, ei, oi, au, eu, ou
Long „	āi, ēi, ūi, āu, ūu, ūu
Short vocalic	ɿ, ɿ, ɳ, ɳ

NOTE.—1. The short vowels i, u, ə, the long vowels ī, ū, and vocalic ɿ, ɿ, ɳ, ɳ occurred originally only in syllables which did not bear the principal accent of the word.

The short vowels i, u, and vocalic ī, ī, ē, ē arose from the loss of e in the strong forms ei, eu, el, em, en, er, which was caused by the principal accent having been shifted to some other syllable in the word.

ə, the quality of which cannot be precisely defined, arose from the weakening of an original ā, ē, or ō, caused by the loss of accent. It is generally pronounced like the final vowel in German *Gabe*, *gift*.

ī and ū were contractions of weak diphthongs which arose from the strong forms eiə, āi, ēi, ōi; euə, āu, ēu, ōu through the loss of accent. The e in eiə, euə had disappeared before the contraction took place. Although the ei, eu, which arose from the weakening of long diphthongs, generally became contracted to ī, ū, there are phonological reasons for assuming that they occasionally became ai, au under certain unknown conditions and thus fell together with original ai, au, but the uncontracted forms were so rare in the parent Indg. language that no further account will be taken of them in this Grammar.

The diphthongs were falling diphthongs, that is the accent was on the first element (see § 98, note 4). Strictly speaking the combination a, e, or o + nasal or liquid is also a diphthong, because the history and development of such combinations are precisely parallel with those of the diphthongs ai, ei, oi and au, eu, ou. See Ch. IV.

2. Upon theoretical grounds it is generally assumed that the parent Indg. language contained long vocalic ī, ī, ē, ē, see § 68.

§ 42. In the following table is given the normal development of the prim. Indo-Germanic short and long vowels, short diphthongs, and short vocalic nasals and liquids in the more important languages, viz. Greek, Sanskrit, Latin, Old Irish, Gothic, Old English, Lithuanian and Old Slavonic :—

Indg.	Gr.	Skr.	Lat.	O.Ir.	Goth.	OE.	Lith.	O.Slav.
a	α	a	a	a	a	æ, (a)	a	o
e	ε	a	e, (o, i)	e, (i)	i, (ái)	e, (i)	e	e
i	ι	i	i	i, (e)	i, (ái)	i	i	ī
o	o	a, (ā)	o, (u)	o, (u)	a	æ, (a)	a	o
u	v	u	u	o, (u)	u, (aú)	u, (o)	u	ū
ə	α	i	a	a	a	æ, (a)	a	o
ā	ā, (η)	ā	ā	ā	ō	ō	ō	a
ē	η	ā	ē	ī	ē	ā	ē	ě
ī	ī	ī	ī	ī	ei	ī	y	i
ō	ω	ā	ō	ā	ō	ō	ū	a
ū	ū	ū	ū	ū	ū	ū	ū	y
ai	αι	ē	ai, (ae)	ai, (ae)	ái	ā	ai, (ē)	ě
ei	ει	ē	ei, (i)	ē, (ia)	ei	ī	ei, (ē)	i
oi	οι	ē	oi, (oe, ū)	oi, (oe)	ái	ā	ai, (ē)	ě
au	αυ	ō	au	ō, (ua)	áu	ēa	au	u
eu	ευ	ō	ou, (ū)	ō, (ua)	iu	ēo	au	u
ou	ου	ō	ou, (ū)	ō, (ua)	áu	ēa	au	u
m	α, (aμ)	a, (am)	em	im, (am)	um	um	iṁ, (im)	ɛ, (im)
n	α, (aν)	a, (an)	en	in, (an)	un	un	iñ, (in)	ɛ, (in)
l	αλ, (λα)	ř, (ir, ur)	ol, (ul), al	li, (al, la)	ul, (lu)	ol	ił, (il)	īl, (lī, lǔ)
r	αρ, (ρα)	ř, (ir, ur)	or, (ur), ar	ri, (ar, ra)	aúr, (ru)	or	iř, (ir)	īr, (rī, rǔ)

NOTE.—From the above table are omitted numerous details for which the grammars of the separate languages should be consulted.

CHAPTER III

THE GREEK DEVELOPMENT OF THE INDO-GERMANIC VOWEL-SYSTEM

A. THE SHORT VOWELS.

a

§ 43. Indg. a remained in Greek as also in the oldest periods of the other languages except Old Slavonic where it became o, as ἀγρός, Skr. ájrah, Lat. ager, Goth. akrs, field; ἀγω, Skr. ájāmi, Lat. ago, O.Ir. agim, I drive, lead, O.Icel. aka, to drive; ἀγχω, Lat. ango, cp. Goth. aggwus, narrow; ἀλλος, Lat. alius, Goth. aljis, other; ἀλς, Lat. gen. salis, O.Ir. salann, Goth. salt, O.Slav. soli, salt; ἀμφω, Lat. ambo; ἀνεμος, wind, Lat. animus, mind, O.Ir. anim, soul, Skr. ániti, he breathes, Goth. us-anan, to breathe out, expire; ἀντί, Skr. ánti, opposite, before, Lat. ante, before, Goth. and, along, on, Lith. aňt, on; ἀξων, Skr. ákṣah, Lat. axis, OHG. ahsa, Lith. aszlis, axle; ἀπό, Skr. ápa, Lat. ab, Goth. af, from, away from; ἀρώ, Lat. aro, Goth. arja, Lith. ariù, I plough, cp. O.Ir. arathar, plough; δάκρυ, Lat. dacruma, lacruma, Goth. tagr, tear; κάπρος, wild boar, Lat. caper, O.Icel. hafr, he-goat; olða = Skr. védā.

e

§ 44. Indg. e (=Skr. a, Lat. e, (o, i), O.Ir. e, (i), Goth. i, (ai), OE. e, (i), Lith. O.Slav. e) generally remained in Greek, as γένος, Skr. jánah, Lat. genus, race, generation; γέννυσις, Skr. hánuh, jawbone, Lat. gena, Goth. kinnus, cheek; δέκα, Skr. dás̄ha, Lat. decem, Goth. taíhun, ten; ἐγώ, Skr. ahám, Lat. ego, Goth. ik, I; ἔδος, Skr. sádah, seat, Lat. sedere, OE. sittan, to sit; ἔδω, Skr. ádmi, Lat. edo, OE. ete, I eat; ἔνος, Skr. sánah, Lat. senex, O.Ir. sen, Goth.

sineigs, Lith. *sēnas*, *old*; ἔπεται, Skr. *sácatē*, Lat. *sequitur*, *he follows*, Lith. *sekù*, *I follow*; ἔπτά, Skr. *saptá*, Lat. *septem*, O.Ir. *secht*, Goth. *sibun*, Lith. *septynì*, *seven*; ἔρπω, Skr. *sárpāmi*, Lat. *serpo*, *I creep*; ἔστι, Skr. *ásti*, Lat. *est*, Goth. *ist*, Lith. *ësti*, *is*; κλέπτω, Lat. *clepo*, Goth. *hlifa*, *I steal*; μέσος, *méos* from *μέθιος, Skr. *mádhyah*, Lat. *medius*, Goth. *midjis*, *middle*; πέντε, Skr. *páñca*, Goth. *fimf*, Lith. *penkù*, *five*; περί, Skr. *pári*, *around*, *about*, Lat. *per-*, O.Ir. *er-*, Goth. *faír-*, Lith. *per-*, *through*; τε, Skr. *ca*, Lat. *que*, *and*; φέρω, Skr. *bhárāmi*, Lat. *fero*, O.Ir. *berim*, O.E. *bere*, O.Slav. *berä*, *I bear*; Cret. *τρέες*, Att. *τρεῖς*, Skr. *tráyah*, from *tréjes, *three*; νέ(f)ος, Skr. *návah*, Lat. *novos*, *-us*, Goth. *niujis*, *new*; βέ(f)ει, Skr. *srávati*, *it flows*; ἥγε, Lat. *age*; δέδορκα= Skr. *dadárśa*; ἔφερον = Skr. *ábharam*, λύκε = Skr. *vŕka*, Lat. *lupe*; γένεος = Skr. *jánasah*, Lat. *generis*; πατέρες = Skr. *pitárah*; φέρετε= Skr. *bháratha*, Goth. *baírip*, O.Slav. *berete*.

NOTE.—1. It is difficult to account for the *i* beside *e* in *ἴσθι*: ἔστι, ίστιή, ίστιά : ἔστιά, κίρημη : κεράννυμι, κρίμνημι : κρεμάννυμι, δριγνάομαι : δρέγω, Hom. πίσυρες : Att. τέτταρες, πίτνημι : πετάννυμι, σκίδημη : σκεδάννυμι, χθιζός : χθές, χιλοι from *χίσλιοι : χελιοι from *χέσλιοι = Lesb. χέλλιοι; ἵππος : Lat. *equos*. In some of the above examples the *i*:*e* may be due to vowel-assimilation, cp. §§ 78-4.

2. *e* became *a* before *ρ* in the dialects of Elis and Locris, as *ἡάργον*, *πατάρα*, *φάρην* = ἔργον, *πατέρα*, *φέρειν*.

3. *e* became *i* before guttural vowels in Boeot. Cypr. Pamph. Thessal. and some of the Doric dialects (Arg. Cret. Heracl. and Lac.), as *θιός* = *θεός*; Boeot. *féria* = ἔτεα; Cret. *ἴωντι* = Att. *ἴωσι*.

i

§ 45. Indg. *i* remained in Greek and generally also in the oldest periods of the other languages, in Latin it became *e* finally (mare beside pl. *maria*) and before *r* from older *s*

(gen. *cineris* beside nom. *cinis*), as δι- from *δ̄F̄t-, Skr. dvi-, Lat. bi-, OE. twi-, *two*; Hom. θέμεν, θέμεν, Skr. vidmá-, OE. witon, *we know*, cp. Lat. vidēre; ἵμεν = Skr. imáḥ, cp. Lat. itum; Dor. acc. īv, *him*, Lat. Goth. is, Lith. jīs, *he*; μινύθω, Skr. minōmi, Lat. minuo, *I lessen*, Goth. mins, less; πίσσα, πίττα from *πικja, Lat. pix, Lith. pikis, pitch; τίς, Lat. quis, *who?*; loc. pl. τριστή, Skr. triśū, Lat. tribus, O.Ir. trib, Goth. þrim, Lith. trisè, *tribus*; ηδιστος, Skr. svádiṣṭah, Goth. sutists, *sweetest*; ἵσταμι, ἵστημι = Skr. tíṣṭhami, cp. Lat. sisto; εἰμί, Skr. ásmi, Lith. esmì, am; ἔστι, Skr. ásti, Lith. ēsti, is; Dor. φέροντι = Skr. bháranti; πόλις, πόλιν, cp. Skr. ávih, acc. ávim, *sheep*, Lat. turris, turrim; loc. sing. μητρί = Skr. mātāri, Lat. mātre, O.Slav. materi.

o

§ 46. Indg. o (Skr. a, also ā in open syllables, Lat. O.Ir. o, (u), Goth. Lith. a, O.Slav. o) remained in Greek, as γόμφος, *nail, bolt*, Skr. jámbhaḥ, *tooth*, OE. camb, *comb*; δέδορκε = Skr. dadárša; δόμος, Lat. domus; δῖς, Skr. ávih, Lat. ovis, Lith. avis, *sheep*, cp. Goth. awistr, *sheep-fold*; ὀκτώ, Skr. aṣṭā, aṣṭāú, Lat. octō, O.Ir. ocht, Goth. ahtáu, *eight*; ὅς, Skr. yáḥ, *who*; dual ὅσσε, cp. Lat. oculus, Lith. akls, O.Slav. oko, *eye*; πόρκος, Lat. porcus, O.Ir. orc, OHG. farah, *pig, boar*; πόσις, Lith. pàts, *husband*, Skr. pátiḥ, *master*, cp. Lat. potis; πότερος, Skr. kataráḥ, Goth. hráþar, Lith. katràs, *which of two?*; πρό, Skr. prá, *before*, Lat. pro-, O.Ir. ro-, Goth. fra-, Lith. pra-, O.Slav. pro-; τό, Skr. tát, Goth. þat-a, O.Slav. to, *the, this*; λύκος = Skr. vŕkāḥ, Lat. lupus, *wolf*; γένος, Skr. yugám, Lat. jugum, *yoke*, Dor. φέρομες, Skr. bhárāmaḥ, Goth. baíram, *we bear*; Dor. φέροντι, Skr. bháranti, Lat. ferunt, Goth. baírand, *they bear*; ἔφερον = Skr. ábharam.

u

§ 47. Indg. u remained in the oldest Greek and generally also in the oldest periods of the other languages, but already at an early period it became ü in Attic and Ionic and probably also in many of the other dialects, as ἐρυθρός, Skr. *rudhirāḥ*, Lat. *ruber*, *red*; γυγόν, Skr. *yugám*, Lat. *jugum*, Goth. *juk*, *yoke*; θυγάτηρ, Skr. *duhitár-*, Goth. *daúhtar*, Lith. *duktė*, *daughter*; κλυτός, Skr. *śrutáḥ*, Lat. *in-clutus*, *renowned*; gen. κυνός = Skr. *śúnah*, Lith. *szuñis*, cp. OE. *hund*, *hound*; ρυός, Skr. *snuśā*, Lat. *nurus*, *daughter-in-law*; βαρύς, Skr. *gurúḥ*, Goth. *kaúrus*, *heavy*; δάκρυ, Lat. *dacruma*, *lacruma*; ἥδυς = Skr. *svādūḥ*; μέθυ, Skr. *mádhu*, Lith. *medūs*, *honey*, OE. *mead*.

NOTE.—1. The original u-sound seems to have been regularly preserved in the Laconian, Boeotian, Lesbian, Thessalian, Arcadian, Cyprian and Pamphylian dialects. In these dialects it is mostly represented by *ov* (sometimes also by *o*) after the introduction of the Ionic alphabet at about the end of the fifth century B. C. In Boeotian u became ju (*iov*) after dental explosives and λ, ν, σ.

2. We have no means of determining the approximate date at which u became ü (= the u in French tu) in Attic and Ionic. But it is certain that Ionic v was no longer pronounced like the u in English *put* at the end of the fifth century B. C., otherwise the Boeotians, &c., would not have taken *ov* to represent their u-sound, when they adopted the Ionic alphabet. Original u must have become a front vowel (ü) in Attic at the period of the oldest inscriptions, because before υ the guttural tenuis is always represented by K and never by φ, see Meisterhans, *Grammatik der att. Inschriften*, pp. 3, 22. On the other hand the Attic and Ionic change of u to ü must be older than the ü (written *ov*) which arose from older oo, eo (§ 80), otherwise this ü would have fallen together with original Indg. ü (§ 55), cp. gen. sing. λόγον from *λόγοο, γένοντο, older γένεος from *γένεος = Skr. *jánasah*, beside μῆς = Skr. *máś*, Lat. OE. *mūs*.

§ 48. Indg. initial **u** appears as **ü**. It is difficult to account for this change unless we may assume that **u** became **ü** through the intermediate stages **ü**, **iu**, **jú** (cp. § 127), cp. the development of Old French **u** in words like NE. **use** (**júz**, northern dial. **íuz**), ME. **üsen** from O.Fr. **user** :—**ǖd̄pos**, **ǖdrā**, *water serpent*, Skr. **udráh**, *water animal*, Lith. **údra**, *otter*; **ǖp̄er**, Skr. **upári**, Lat. **s-uper**, Goth. **ufar**, *over, above*; **ǖst̄ep̄os**, Skr. **úttarah**, *latter, later*.

ə

§ 49. **ə**, which arose from the weakening of original **ā**, **ē**, **ō** (§ 87), became **a** in all the Indg. languages, except the Aryan branch where it became **i**, as **πατήρ**, Lat. *pater*, O.Ir. **athir**, Goth. **fadar**, Skr. **pitár-**, *father*; **στατός**, Lat. **status**, Skr. **sthitáh**, *standing*, Goth. **staþs**, *place*; **θυγάτηρ**, Skr. **duhitár-**, *daughter*; **πανδαμάτωρ**, cp. Skr. **da-mitár-**, *tamer*; **κάματος** = Skr. **śamitáh**; **ἀνεμος**: Skr. **ániti**, *he breathes*; **γενέτωρ** = Skr. **janitár-**; **κρέας**, Skr. **kravíh**, *flesh, raw meat*; nom. acc. neut. pl. **φέροντα** = Skr. **bháranti**.

NOTE.—In forms like **θετός**, Skr. **hitáh**, **τίθεμεν** for ***τίθαμεν**: **τίθημι**; **δοτός**, Lat. **datus**, **δίδομεν** for ***δίδαμεν**: **δίδωμι** the **ε**, **o** was due to qualitative assimilation to the **η**, **ω**, but this does not account for the **ε** in the second syllable of dissyllabic heavy bases like **γενέτωρ** : Skr. **janitár-**.

B. THE LONG VOWELS.

ā

§ 50. Indg. **ā** (= Skr. Lat. O.Ir. **ā**, Germanic Lith. **ō**, O.Slav. **a**) remained in all the Greek dialects except Ionic and Attic, as Dor. **ἄδυς**, Skr. **svādūh**, Lat. **suāvis**, OS. **swōti**, *sweet*; Dor. **μάτηρ**, Skr. **mātár-**, Lat. **māter**, O.Ir. **māthir**, OE. **mōðor**, O.Slav. **mati**, *mother*, Lith. **motė**, *wife*; Dor. **φαγός**, *a kind of oak*, Lat. **fagus**, OE. **bōc-trēow**, *beech*;

Dor. φράτηρ, *member of a clan*, Skr. bhrātar-, Lat. frāter, O.Ir. brāthir, OE. brōþor, *brother*, Lith. broterēlis, *little brother*; Dor. ἔβαν, Skr. ágām, *I went*; Dor. ἔσταν, Skr. ásthām, *I stood*, Lat. stāre, *to stand*, cp. OE. stōd, *I stood*; nom. acc. sing. Dor. τίμα, τίμαν, cp. Skr. áśvā, áśvām, *mare*; ending of the third pers. dual active Dor. -τᾶν = Skr. -tām.

§ 51. Indg. ā became η (=long open ē) in prim. Attic and Ionic. In the oldest historic period this η was more open than the η = Indg. ē (§ 52), the former being written H and the latter E in the oldest Ionic inscriptions. η from older ā remained in Ionic, but became ā again in Attic after ρ, ε, ι, as Dor. ἄδυς, ἵσταμι, μάτηρ, φᾶμι, ἔβαν, τίμα = Attic, Ionic ἡδύς, ἴστημι, &c. Attic πράττω, χώρα, γενέά, νεᾶνις, βία, καρδία = Ionic πρήσσω, χώρη, γενεή, νεηνίης, βίη, κραδίη. But η did not become ā after ρ in Attic when an intervening F had disappeared, as Att. κόρη, Ion. κούρη, Arcad. κόρφα; Att. δέρη, Ion. δειρή, Lesb. δέρρα, from *δέρφα.

ē

§ 52. Indg. ē (= Skr. ā, Lat. Goth. ē, O.Ir. ī, Lith. ē, OE. ē, O.Slav. ě) generally remained in Greek, as ἀημι from *ἄ-ϝη-μι, Skr. vāmi, *I blow*, Lith. vėjas, *wind*; Hom. ἡα, Skr. ásam, *I was*; ἡμί, Skr. sāmī, Lat. sēmi-, *half*; acc. Ζῆν = Skr. dyáṁ, *sky*; μῆν, Lat. mēnsis, O.Ir. mī, *month*, Skr. mās-, Goth. mēna, Lith. mēnū, *moon*; πλήθω, *I am full*, Skr. prātāḥ, Lat. im-plētus, *full, filled*; τίθημι = Skr. dādhāmi, cp. Lith. déti, *to put, place*; εῖης, Skr. syāḥ, O.Lat. siēs, *thou mayest be*.

NOTE.—1. In the oldest Attic and Ionic η = Indg. ē was closer than η from Indg. ā (§ 51), the former being written E and the latter H in the oldest Ionic inscriptions, as ΜΕ = Dor. μή, but ΔΗΜΟΣ = Dor. δᾶμος. The two sounds fell together in Attic in the fifth century B. C.

2. Indg. ē became a very open sound (æ) in the dialect of Elis, which was often written ā, as μᾶ, πατάρ = μῆ, πατήρ. In Boeotian, Thessalian and Pamphylian it became long close ē which was written ει (§§ 12, 58) after the introduction of the Ionic alphabet in the fifth century B.C., as Boeot. Thess. ἔθεικα, μει, Pamph. Μεγάλεις = ἔθηκα, μῆ, Μεγάλης.

ī

§ 53. Indg. ī remained in Greek and generally also in the oldest periods of the other languages, as īμās, *leathern strap*, Skr. sīmān-, *parting of the hair on the top of the head*, OE. sīma, *rope, cord*; īréā, *willow*, Lat. vītis, *vine*, Lith. výti, O.Slav. viti, *to wind, plait*; īós from *fīsos, Lat. virus, O.Ir. fī, *poison*; īs = Lat. vīs; πīθī, *drink thou*, Skr. pītāḥ, *having drunk*, O.Slav. piti, *to drink*; πī(F)os, πī(F)ων, Skr. pīvan-, *fat, plump*; κορακīnos, cp. Skr. nāvīnah, *new*, Lat. haedīnus, Goth. gáiteins, *belonging to a goat*.

ō

§ 54. Indg. ō (= Skr. O.Ir. ā, Lat. and Germanic ō, Lith. ū, O.Slav. a) remained in Greek, as acc. sing. Dor. βāw = Skr. gām; γνωτōs, Skr. jñātāḥ, Lat. (g)nōtus, O.Ir. gnāth, *known*; δīdāmu = Skr. dādāmi; δōpor, Skr. dānam, Lat. dōnum, O.Ir. dān, *gift*, Lith. dūti, O.Slav. dati, *to give*; δōw, Vedic duvā, dvā, O.Ir. dā, *two*; πέπωκa, Lat. pōtāvi, *I have drunk*, Skr. pāti, *he drinks*; πλωτōs, *swimming*, Goth. flōdus, OE. flōd, *flood, tide*, cp. Lat. plōrāre, *to weep aloud*; Dor. πώs (Att. Ion. πoύs, the ov of which has never been satisfactorily explained), Skr. pāt, OE. fōt, *foot*; ḡkūs, Skr. āśūḥ, *quick*, Lat. ōcior, *quicker*; δōtwōp, Skr. dātā, *giver*; nom. acc. dual of o-stems λúkω = Vedic v̄kā; τéktωn, Skr. tākṣā, *carpenter*; φéρω = Skr. bhárā-mi; φéρéτω = Skr. bháratād, cp. O.Lat. estōd.

NOTE.—ō became ū (written ov) in the Thessalian dialect, as ἔδουκε, γνούμā = Att. ἔδωκε, γνώμη.

ū

§ 55. Indg. ū remained in the oldest Greek and generally also in the oldest periods of the other languages, but already at an early period it became ū in those dialects which changed u to ū (§ 47), as ἔφυτον, Skr. ábhūtam, *ye two were*, cp. Lith. búti, *to be*; θῦμός, *courage, passion*, Skr. dhūmāḥ, Lat. fūmus, Lith. dūmai (pl.), *smoke*; σκῦτος, Lat. scūtum, *shield*; μῦς, Skr. mūś, Lat. O.E. mūs, *mouse*; νῦν, Skr. O.E. nū, *now*; ὀφρύς, Skr. brūḥ, O.E. brū, *eyebrow*; πύθω, *I make to rot*, Skr. púyati, *he stinks*, Lith. púti, *to rot*, O.E. fūl, *foul, rotten*; ӯs, Lat. sūs, O.E. sū, *sow, pig*, Skr. sū-karāḥ, *boar*.

C. THE SHORT DIPHTHONGS.

ai

§ 56. Indg. ai (= Skr. ē, Lat. O.Ir. ae (older ai), Goth. ái, O.E. ā, Lith. ai, (ē), O.Slav. ě) generally remained in Greek, as αἴθω, *I burn*, Skr. édhah, *firewood*, Lat. aedēs, *sanctuary*, originally *fire-place, hearth*, O.Ir. aed, *fire*, O.E. ād, *funeral, pile*; αἰών, Lat. aevum, Goth. áiws, *life-time, eternity*; λαῖός, Lat. laevis, *left*; σκαιός, Lat. scaevus, *left*; fem. nom. pl. ταί = Skr. té, Lat. is-tae; φέρεται, φέρονται = Skr. bháratē, bhárantē.

NOTE.—In Boeotian *ai* became *ae* in the fifth century B. C., which a century later became *η*, and then still later long close *η* (written *ει*).

§ 57. The combination -ai^f- became -ā- before ε- and ι-vowels in Attic and Ionic, as δᾶήρ from *δαιϝήρ, Skr. dēvār-, Lat. lēvir, Lith. dēveris, *brother-in-law*; ἄει, Cypr. aifεi, beside αἰών; κάει, κλάει from *καίfei, *κλαífei, beside καίω, κλαίω; Ion. ἄίσσω, Att. ἄττω from *aifikjw. Forms like κάω, κλάω were new formations due to levelling out the *ā* in forms like κάει, κλάει. In Att. aieί the *ai* was due to the influence of αἰών. See §§ 75, 125.

ei

§ 58. Indg. ei (= Skr. ē, O.Lat. ei, later ī, O.Ir. ē, (ia), OE. ī, Goth. ī (written ei), Lith. ei, (ē), O.Slav. i) remained in Greek until about the beginning of the fifth century B.C., when it became long close ē in Attic, Ionic and the milder Doric dialects, although ει was retained in writing. This accounts for the writing of ει for older εε in such forms as Att. τρεῖς from *τρέγεις = Skr. tráyah. The old diphthongal pronunciation was still preserved at the time when vowel contraction took place in such forms as Att. ἔδω = ἀείδω, νικᾶς = νικάεις, as compared with φᾶνός = φαεινός from *φαεσνός, νικᾶν = νικάειν from *νικάεειν. Examples are:—δείκνυμι, *I show*, Lat. dīco, *I say*, Goth. ga-teihan, *to tell, announce*; εἰσι, Skr. ēti, Lith. eiti, eit, *he goes*, Lat. īs, *thou goest*; λείπω, Lith. lēkū, *I leave*, Goth. leiwan, *to lend*; πείθω, Lat. fido, cp. OE. bīdan, *to remain*; στείχω, cp. OE. stīgan, *to rise*.

NOTE.—In Boeotian ei had become ī already in the fifth century B.C., as ἀιδῶ = ἀειδῶ.

oi

§ 59. Indg. oi (= Skr. ē, O.Lat. oi, oe, later ū, O.Ir. oi, (oe), Goth. ái, OE. ā, Lith. ai, (ē), O.Slav. ě) remained in Greek, as οἶδα, Skr. vēda, Goth. wáit, OE. wāt, *I know*; οἴνη, οἴνή, *the one on dice*, Lat. oinos, ūnus, O.Ir. oen, Goth. áins, OE. ān, *one*; masc. nom. pl. τοί, Skr. té, Goth. þái, OE. þā, Lith. tē, *the, these*; λέλοιπε, Skr. rirēca, *has left*, Goth. láilv, OE. lāh, *he lent*; loc. pl. λύκοι-σι = Skr. vṛkē-śu.

NOTE.—In Boeotian oi became oe in the fifth century B.C., which two centuries later became ū and then still later ī (written ει).

au

§ 60. Indg. au (= Skr. ओ, Lat. Lith. au, O.Ir. ᚠ, (ua), Goth. áu, OE. ēa, O.Slav. u) remained in Greek, as αὔξω, αὔξανω, Lat. augeo, Goth. áuka, Lith. áugu, *I grow, increase*, cp. Skr. ójas-, *strength*; अवोς from *σαυσος, OE. sēar, Lith. saūsas, *dry, withered*; καυλός, Lat. caulis, *stalk*; ταῦπος, Lat. taurus, *bull*; अ॒, अ॑-ते, *again*, Lat. aut, au-t, au-tem.

eu

§ 61. Indg. eu (= Skr. ओ, O.Lat. ou, later ū, O.Ir. ᚠ, (ua), Goth. iu, OE. ēo, Lith. au, O.Slav. u) remained in Greek, as εὔω, Skr. ओशामि, Lat. ūro, *I burn*; γέω, *I give a taste of*, Skr. जोशति, *he tastes*, Goth. kiusan, OE. cēosan, *to choose*; πεύθομαι, *I inquire*, Skr. बोधति, *he is awake, learns*, Goth. ana-biudan, *to order, command*, OE. bēodan, *to offer*; ζεῦγμα = Lat. jūmentum, νεῦμα = Lat. nūmen, voc. Ζεῦ πάτερ = Lat. Jūpiter.

ou

§ 62. Indg. ou (= Skr. ओ, O.Lat. ou, later ū, O.Ir. ᚠ, (ua), Goth. áu, OE. ēa, Lith. au, O.Slav. u) remained in the oldest period of the language, but in Attic and Ionic it became ū through the intermediate stage of long close ओ in the fifth century B.C., although the *ov* was retained in writing. This accounts for the writing of *ov* for older *oo* in such forms as gen. ἵππου from older *ἵπποο ($\S\ 325$) and in ἵππονς from older ἵππονς ($\S\ 69$). From our knowledge of the other Indg. languages the diphthong ou must have been fairly common in the parent language, but in Greek there are only a few words which contain it, as ἀκούω, Goth. háusja, *I hear*. It occurred originally especially in the perfect active singular of verbs which have -ev- in the present stem-forms and in nouns related to such verbs, as

Hom. εἰλήλουθε : fut. ἐλεύσομαι from *έλεύθομαι; σπουδή: σπεύδω; but in verbs like κένθω, τεύχω, φεύγω the perfect active κέκενθα, τέτευχα, πέφευγα for *κέκουθα, &c., was formed direct from the present, see § 518.

D. THE LONG DIPHTHONGS.

§ 63. The parent language had the same number of long as of short diphthongs, but the history of the former in the separate languages differs materially from that of the latter. The second element of long diphthongs often disappeared medially before consonants (especially m), and also finally, as acc. sing. Hom. and Dor. βῶν = Skr. gám beside nom. gāúḥ; ὥκτω, Lat. octō, Skr. aṣṭā́ beside aṣṭá, Goth. ahtáu, Indg. *októu. The exact conditions under which the second element remained or disappeared have never been ascertained. When the second element was preserved in the European languages, the first element was regularly shortened before a following consonant, as Ζεύς from *Ζηνός = Skr. dyāúḥ, sky; λύκοις, Lat. lupīs, Lith. vilkaīs, beside Skr. vṛkāih. When the second element of a long diphthong disappeared or when the first element was simply shortened, the resultant long vowel or short diphthong had the same further development in the different languages as the original simple long vowels or short diphthongs.

āi: Opt. δραῖμεν from *δρᾶιμεν, beside indic. ἔδρᾶμεν; Θηβαι-γενῆς, μεσαι-πόλιος; dat. sing. χώρᾳ, θεῷ, cp. Skr. sénāyāi, to an army, Lat. mensae, Osc. deívaí, divae, Goth. gibái, to a gift, Lith. raiñkai, to a hand.

ēi: Opt. γραφεῖμεν from *γραφηῖμεν, beside indic. ἔγραφην; aor. ἐλειψα from *ἐληιψα = Skr. árāikśam, Indg. *éleiqsm (cp. § 507); θη-λή, θῆσθαι, cp. Lat. fē-mina, fē-lāre, root dhēi-, suckle.

ōi: λύκοις, Lat. lupīs, Lith. vilkaīs, beside Skr. vṛkāih;

opt. *γνοῖμεν* from **γνωιμεν*, beside indic. *ἴγνωμεν*; dat. sing. *λύκῳ*, Lat. *lupō*, Lith. *vilkui*, beside Skr. *vṛkāya* (with the enclitic particle *-a*), cp. Skr. dat. sing. *tásmai*, *him*.

āu: *ναῦς* beside Skr. *nāúḥ*, *ship*; loc. pl. *ναυσί*, Skr. *nāuṣū*.

ēu: *Zeús* from **Zηύς* = Skr. *dyāúḥ*, *sky*; *έζευξα* = Skr. *āyāukṣam*, Indg. **éjēuqsm̥* (cp. § 507); acc. *Zῆν* = Skr. *dyám*.

ōu: *βοῦς* from **βωύς* = Skr. *gāúḥ*; acc. Dor. *βῶν* = Skr. *gām*; dual of o-stems *λύκω* = Skr. *vṛkāu* beside *vṛkā*; *πλωτός*, cp. OE. *flood*, *tide*, beside Lith. *pláuju*, *I rinse*.

E. THE VOCALIC NASALS AND LIQUIDS.

§ 64. The vocalic nasals and liquids, generally written *m̥*, *ŋ̥*, *l̥*, *r̥* in order to distinguish them from the corresponding consonants *m*, *n*, *l*, *r*, occurred originally in unaccented syllables only. They arose in the parent Indg. language through the loss of a preceding (rarely following) vowel. This loss was caused by the shifting of the principal accent from the syllable originally containing the vowel to some other syllable in the word. Then consonantal *m*, *n*, *l*, *r* became vocalic just in the same manner as consonantal *i* and *u* in the combinations *ei* and *eu* became vocalic after the loss of *e* in such words as *ἄλιπον* : *λείπω*, *ἔφυγον* : *φεύγω*, so also *φρασί* : *φρένες*, *ἔπαθον* : *πένθος*, *ἔδρακον* : *δέρκομαι*. But already in the parent language or at least in the prehistoric period of all the Indg. languages, the vocalic nasals and liquids came analogically to have the principal accent in certain words, as *ἐπτά*, Skr. *saptá*, Lat. *septem*, from **septn̥*, older **séptm̥*, *seven*; *λύκος*, Skr. *vṛkāḥ*, Lat. *lupus*, Goth. *wulfs*, Lith. *vilkas*, from **wíqos*, older **wl̥qos*.

I. Short Vocalic Nasals.

§ 65. In Greek and Sanskrit m , n had a twofold development according to their position in the word :—

1. Finally and before consonants except semivowels they became a in these two languages, and in Lat. em , en , Germanic um , un , Lith. iñ (im), iñ (in), O.Slav. e , (im , in), as $\delta\acute{\epsilon}\kappa\alpha$, Skr. dáśa , Lat. decem , Goth. taíhun , from $*dékmt$, beside Lith. $dēsamt$, O.Slav. desęt , from $*dékmt$. ten ; $\acute{\epsilon}\text{-katón}$, Skr. śatám , Lat. centum , Goth. hund , from $*kmtóm$, *hundred*; $\beta\acute{\epsilon}\sigma\text{is}$, Skr. gátih , *gait, step*, Goth. ga-qumþs , *assembly*, from $*qmtis$; $\ddot{\alpha}\text{-pa\xi}$, Skr. sa-k\xi , *once*, Lat. sim-plex older $*\text{semplex}$, from $*sm$: $\acute{\epsilon}v$ from $*\text{sem}$, *one*; acc. sing. of consonantal stems as $\pióða$, $\phiéronτa$, Lat. pedem , *ferentem*; Hom. $\text{\eta}\alpha$ from $*\text{esm}$, *I was*.

$\tau\acute{\epsilon}\tauós$, Skr. tatáh , Lat. *tentus*, from $*tntós$, *stretched*; $\delta\alpha\sigma\text{us}$, Lat. *densus*; $\phi\acute{\epsilon}\tauós$, Skr. hatáh , *killed*: $\phi\acute{\epsilon}\text{vros}$; $\ddot{\alpha}\text{-yñwatos}$, Skr. á-jñātah , Goth. un-kunþs , *unknown*, from $*\text{ñ-}$: $*\text{ne, not}$; δvoma , Skr. náma , Lat. nōmen , *name*; acc. pl. of consonantal stems, as $\pióðas$, Skr. pádah , Lat. pedēs from $*\text{pedens}$, Goth. fötuns , *feet*; loc. pl. of n -stems, as $\phi\acute{\epsilon}\text{rasí}$: $\phi\acute{\epsilon}\text{vnes}$, in this case the regular development was almost entirely obliterated in Greek by new formations formed after the analogy of the other cases, as $\pi\text{oiméσi}$ for $*\text{piοimáσi}$, $\kappa\text{vσi}$ for $*\text{kvaσi}$ = Skr. śvásu (§ 345); $\mu\text{εμάτω}$ = Lat. *mementō*; Hom. $\text{\eta}\text{atai}$, Skr. ásatē , from $*\text{esntai}$, *they sit*; $\pi\acute{\epsilon}\text{phatai}$: $\phi\acute{\epsilon}\text{vros}$, and similarly $\gamma\acute{\epsilon}\text{γaμeν}$, $\mu\acute{\epsilon}\text{μaμeν}$, $\text{\eta}\text{πaθoν}$: γéyova , $\mu\acute{\epsilon}\text{μoνa}$, πéπoνθa .

2. Before vowels and semivowels m , n became am , an in Greek and Sanskrit, but in Lat. Germanic and Lith. they had the same development as in 1. Some scholars maintain that the original vowel did not entirely disappear in these positions, but that it merely became reduced in quality. Instead of m , n they accordingly write em , en and assume that the e became a in Greek and Sanskrit

and the consonants **m**, **n** remained. Other scholars write the sounds in question as **mm**, **nn** before vowels and **m**, **n** before semivowels. The correct interpretation of the development is probably that the off-glide of the nasal remained consonantal, and that this eventually became a full nasal consonant, cp. the consonantal off-glide in NE. *seldm̩ iz*, *seldom is*, *ritŋ̩ it*, *written it*.

ámo- (in **ámuθev**), Skr. **sama-**, Goth. pl. **sumái**, from ***smo-**, *some one, any one*; **ταμεῖν** : **τέμνω**.

τανύ- (in **τανύ-δρομος**, **τανύ-ποντος**), Skr. **tanúḥ**, Lat. **tenuis**, OHG. **dunni**, from ***tñu-**, *stretched, thin*; Boeot. **βανά**, Vedic **ganā-**, O.Icel. **kona**, from ***gñā-** : Goth. **qinō**, *woman*; **ἄνυδρος**, Skr. **anudráḥ**, *waterless*; **τάνυται** = Skr. **tanuté**; **κτανεῖν** : **κτείνω** from ***κτενյό**.

Hom. **ικάνω** from ***ikavfω**; **μανός**, **μαρός**, from ***μανfós**. **-αμj-** and **-aŋj-** became **-ai-** (§ 75), as **βαίνω** from ***βαιjω**, older ***βαμjω**, Lat. **venio** from ***gwenjō**, older ***gwemjō**, Indg. ***gñmjō**, cp. Skr. opt. **gamyāt**, *he may go*. **καίνω** from ***κανjω**; and similarly **κταίνω**, **μαίνομαι**, **ποιμαίνω**, **δύομαίνω**, **πεπαίνω**, **σπερμαίνω**.

2. Short Vocalic Liquids.

§ 66. Many points connected with the development of the Indg. vocalic liquids in the various languages have never been definitely settled. The vowel which was developed before or respectively after liquids in the prehistoric period of the European languages seems to have been unstable in quality, when it was preceded or followed by a labial or guttural. In Greek, Latin, Keltic and the Baltic-Slavonic languages the vowel sometimes appears in this position as **u**, as in Gr. **λύκος**, Lat. **lupus**, O.Slav. **vlǔkū**, beside Skr. **vṛkāḥ**, Indg. ***w̥lqos**, *wolf*; **φύλλον** from ***phuljōn**, beside Lat. **folium**; **ἄγυρις** : **ἀγείρω**. For further examples, see Brugmann's *Grundriss*, &c., vol. i, second ed., pp. 453-5. It will also be noticed from the normal development of the vocalic

liquids given below that the vowel sometimes appears before and sometimes after the liquid. The reason for this twofold development is unknown. In Greek *λα*, *ρα* beside *αλ*, *αρ* only occur before consonants. In all other positions we have *αλ*, *αρ*. Various attempts have been made by scholars to account for the difference in the position of the vowel, but they all leave a large residuum of unexplained forms.

§ 67. In several languages *l*, *r* had a twofold development according to their position in the word:—

1. Before consonants. In this position they became in Gr. *αλ*, *λα*; *αρ*, *ρα*, Skr. *ঁ*, Lat. *ol*, *ul*; *or*, *ur*, prim. Germanic *ul*, *ur* (rarely *lu*, *ru*) = Goth. *ul*, *aúr*, but *ol*, *or* in the other Germanic languages, Keltic *li*, *ri*, prim. Baltic-Slavonic *il*, *ir*, as *πλατύς*, Skr. *pr̥thūḥ*, *broad*, OE. *folde*, Skr. *pr̥thiví*, *earth*; *-πίπλαμεν*, Skr. *piρmáḥ*, *we fill*; *τέταλμαι* : *τέλλω*; *ἔσταλμαι, στάλσις* : *στέλλω*; *ἐκλάπην* : *κλέπτω*. *σκάλλω* from **σκαλjω*, *I stir up*, Lith. *skiliù*, *I strike fire*, Indg. **sqljō*; and similarly *βάλλω*, *πάλλω*, &c.

καρδίā, Ion. *κραδίη*, Lat. *cor* (gen. *cordis*), O.Ir. *cride*, Lith. *szirdis*, *heart*; *ἔδρακον* = Skr. *ádṛśam*: *δέρκομαι*; *θαρσύς, θρασύς* : Aeol. *θέρσος*, cp. Skr. *dhr̥ṣṇōti*, *he dares*, Goth. *ga-daúrsan*, *to dare*; *κράνος, κράνον*, Lat. *cornus*, *cornum*, *cornel-tree*; *τέταρτος*, Hom. *τέτρατος* from **τέτρατος*, Lith. *ketvižtas*, *fourth*; *ἄρσην* : Ion. *ἔρσην*; *θάρσος, κράτος* : Aeol. *θέρσος*, *κρέτος*; loc. pl. *πατράσι*, Skr. *pitṛśu*, OE. *fæderum*, *to fathers*; *δαρτός, δρατός, δεδαρμένος* : *δέρω*; and similarly *ἔπραθον*, *ἔσπαρμαι, πέπαρμαι, κάρσις, ταρσός, τραπεῖν, τραφεῖν* : *πέρθω, σπείρω, πείρω, κείρω, τέρσομαι, τρέπω, τρέφω*. The combination *-αρj-* became *-αιρ-* (§ 75), as *σπαίρω* from **σπαρjω*, *I struggle convulsively*, Lith. *spiriù*, *I push with the foot*; and similarly *ἔχθαιρω, πταιρω, σκαιρω, χαιρω, θαιρός* from **θερjos*, Indg. **dhwṛjōs*.

2. Before vowels *l*, *r* (cp. § 65, 2) became in Gr. *αλ*, *αρ*,

Skr. *ul* (= Indg. *l*), *ur*, *ir* (= Indg. *l*, *ṛ*), Lat. *al*, *ar*, Keltic *al*, *ar*, Germanic and Baltic-Slavonic as in *i*, as *rálaś*, *enduring*, Skr. *tulá*, *balance*, *scale*, O.Ir. *talla*, *he takes away*, Goth. *þulan*, OE. *þolian*, *to suffer*, *endure*; *παλύνω*, *I strew*, Lat. *palea*, *chaff*; *καλιά*, Skr. *kuláyam*, *hut*, *nest*; *βαλεῖν*, *ἐστάλην* : *βέλος*, *στέλλω*.

βαρύς, Skr. *gurúḥ*, Goth. *kaúrus*, Indg. **grús*, *heavy*; *πάρος*, Skr. *puráḥ*, Goth. *faúra*, OE. *fore*, *before*; *κάρα*, Skr. *śíras-*, *head*; *ἔδαρην*, *πταρμός* : *δέρω*, *πτόρος*.

Examples of final *ṛ* in Greek are: *ἥπαρ*, Skr. *yakṛt*, Lat. *jecur*, *liver*; *ἥμαρ* : *ἥμέρα*; *ἔαρ* from Indg. **wésr*.

3. Long Vocalic Nasals and Liquids.

§ 68. Whilst all scholars agree that the parent Indg. language possessed short vocalic nasals and liquids, there is considerable difference of opinion as to whether long vocalic nasals and liquids existed in the parent language. Just as *i*, *u*, *m̥*, *n̥*, *l̥*, *ṛ̥* arose from the weakening and eventual loss of *e* in the diphthongs *ei*, *eu*, *em*, *en*, *el*, *er*, and as *ī*, *ū* arose from the weakening and eventual loss of *e* in the combinations *eja*, *ewə*, it can be assumed upon theoretical grounds that *m̥̥*, *n̥̥*, *l̥̥*, *ṛ̥̥* arose in the parent language from the weakening and eventual loss of *e* in the combinations *emə*, *enə*, *elə*, *erə*, where *ə* represents the weakening of *ā*, *ē*, or *ō* (§ 87). But whereas *ī* and *ū* regularly appear in the oldest stages of all the Indg. languages, no language has preserved a long vocalic nasal or liquid in historic times. Notwithstanding the above parallels the subject still requires further investigation before it can be established with any degree of certainty that these sounds existed in the parent language. Most of the forms which are supposed to represent a long vocalic nasal or liquid in Greek, Latin and Keltic admit of an entirely different explanation, viz. as being dissyllabic heavy bases with loss of vowel in the first syllable and preservation of an original long vowel in

the second syllable (§ 90), as *gnātós from the base *genā-, whence Lat. (g)nātus, *born* : genitor, but this would not account for Skr. jātāḥ, *born, begotten*, which presupposes an original form *gñtós; *dhwnātós, whence Dor. θνᾶτός, Att. Ion. θνῆτός, beside θάνατος from *dhwñatós; *grōtēr from the base *gerō-, whence Gr. βρωτήρ, beside βάραθρον from *grēdhrōm. But this explanation of the Greek and Latin forms would not account for the equivalents in Sanskrit, Germanic and the Baltic-Slavonic languages. From what has been said above it will be seen that the whole subject is at present beset with unsolved difficulties. Brugmann, *Kurze vergleichende Grammatik*, pp. 121–38, regards the following as the normal development of the long vocalic nasals and liquids in the various languages. For the treatment of the whole subject from an entirely different standpoint, the student should consult Hirt, *Der indogermanische Ablaut*.

Indg.	Gr. (Dor.)	Skr.	Lat.	Keltic	Germanic	Lith.
ṁ	μā	ā, ām	mā	mā	um	ím
ñ	νā	ā, ān	nā	nā	un	ín
ī	λω	īr, ūr	lā	lā	ul, (lu)	íl
ṛ	ρω	īr, ūr	rā	rā	ur, (ru)	ír

NOTE.—ṁ, ñ regularly became ām, ān before a following y in Sanskrit.

Examples are: νεό-δματος, -δμητος, *new-built*, Lat. mā-teriēs, from *dmā- : δέμω; δμητήρ, δμητός, from *δμā-, Skr. dāmyati, *he tames* : Lat. domitor, domitus.

κνήμη, older *knāmā, *shin-bone, leg*, O.Ir. pl. cnāmai, *bones*; νῆσσα from older *nāssā, *duck*, Skr. ātī, *a kind of aquatic bird* : Lat. gen. anatis, Lith. ántis, *duck*; Skr.

jātāḥ, Lat. (g)nātus, *born*, Goth. aírþa-kunds, *born of the earth*: Lat. genitor.

βλωθρός, *tall*, Skr. mūrdhān-, *height, head*; Skr. ūrṇā, Lat. lāna, O.E. wulle, Lith. vīlna, from *wīlnā, *wool*: Gr. οὐλός from *φολνός, *thick, fleecy*; Skr. pūrnāḥ, *filled*, O.Ir. lān, Lith. pīlnas, *full*.

βρωτήρ, *devourer*, Skr. gīrnāḥ, *swallowed up*, Lith. gírtas, *drunken*; στρωτός, Lat. strātus, Skr. stīrnāḥ, *spread, strewed*; Dor. Ion. τετρώ-κοντα, Lat. quadrā-gintā; πρῶτος from *πρωφατος, Skr. pūrvyāḥ, *first*.

THE LENGTHENING OF SHORT VOWELS.

§ 69. Short vowels were often lengthened through the loss of a following consonant. This process is sometimes called compensation lengthening. In Att. and Ion. e became long close ē (written ει, see § 58), and o became ū (written ου, see § 62) through the intermediate stage of long close ḍ. In Dor. they became η and ω. The following are the principal cases in which short vowels were lengthened:—

i. In final or medial syllables in Attic and Ionic through the loss of a nasal before a following s whether original or developed from some other source, the long vowel having passed through the intermediate stage of a long nasalized vowel, as eīs from *sems, Cret. ēνς. Masc. nom. sing. μέλᾶς, τάλᾶς, from *μέλανς, *τάλανς. Acc. pl. τīμᾶς, Cret. -ανς; λύκους, Cret. -ονς, Goth. wulfans; Heraclean τρῆς (Att. Ion. τρεῖς was the nom. used for the acc.), Cret. τρίνς, Goth. þrins. Masc. nom. sing. γίγᾶς, τιθεῖς, χαρίεις (cp. Skr. pad-vánt-, *having feet*), διδούς, from *γύγαντς, *τιθέντς, *χαρί-εντς, *διδόντς. πᾶσα from *παντja; μοῦσα, Dor. μῶσα, from *μοντja; φέρουσι = Dor. φέροντι, Skr. bháranti, Goth. baírand; fem. participle φέρουσα, from *φέροντja, see § 129, 6. The same lengthening also occurs through the loss of a nasal in the combination Ion. -ᾶσσ-, Att. -ᾶττ-, from older -αγχj- (§ 156), as Ion. ἀσσον

from *ἀνσσον, older *ἀγχον, cp. ἄγχι; Ion. ἐλάσσων, Att. ἐλάττων, from *ἐλαγχών; Ion. θάσσων, Att. θάττων, from *θαγχών.

2. s in the combination ms, ns + vowel became voiced and then became assimilated to the preceding nasal. The long (double) nasal remained in Lesbian, but in the other dialects it was shortened or simplified and the preceding vowel was lengthened by transferring the long quantity of the consonant to the vowel, as gen. Att. Ion. χηνός, Dor. χᾶνός, cp. Skr. *hásā-*, Lat. *anser* for older *hanser, Germ. *gans*, *goose*; aorist Att. Ion. ἔφηνα, Dor. ἔφανα, from *ἔφανσα; Att. Ion. ἔμεινα, Dor. ἔμηνα, Lesb. ἔμεννα, from *ἔμενσα; Att. Ion. ἔνειμα, Dor. ἔνημα, Lesb. ἔνεμμα, from *ἔνεμσα; ἔκρινα from *ἔκρινσα. νίσομαι from *νίνσομαι.

3. *vj*, *pj* became *vv*, *pp* which remained in Lesbian, but became simplified in Att. Ion. with lengthening of the preceding ε, ι, υ, cp. 2, as Att. Ion. κτείνω, φθείρω, Lesb. κτέννω, φθέρρω, from *κτένյω, *φθέρյω; πεῖρα from *περյα; Att. Ion. κλίνω, οἰκτίρω, I. πίτη, Lesb. κλίννω, οἰκτίρρω, from *κλίνյω, *οἰκτίρյω; δτρύνω from *ότρύνյω. See § 129, 4.

4. s in the combination s + liquid or nasal became voiced and then became assimilated to the following liquid or nasal. The long (double) consonant remained in Lesbian, but was simplified in the other dialects with lengthening of the preceding vowel, cp. 2, as Ion. τρήρων from *τράσσρων; Att. Ion. χείλιοι, Lesb. χέλλιοι, cp. Skr. sa-hásram, thousand; Att. Ion. σελήνη, Dor. σελάνā, Lesb. σελάννā, from *σελάσνā; Att. Ion. ἡμεῖς, Dor. ἄμες, Lesb. ἀμμες, from *ἄσμε= Skr. asmā, Indg. *ŋ-sme; ειμί, Dor. ἡμί, Lesb. ἔμμι = Skr. ásmi, Indg. *esmi; Att. φᾶνός, Ion. φαευός, Lesb. φάεννος, from *φαεσνός; ἥλαος, Lesb. ἥλλαος, from *σισλαῖος.

5. Intervocalic σf disappeared with lengthening of the

preceding vowel, as Dor. *νᾶός*, Ion. *νήός*, Att. *νεώς* (§ 72), from **νασfós*; Hom. *τελήεις*, *τέλειος*, from **τελεσfεντς*, **τελεσfος*; *ἴός* from **ἰσfος*.

6. -λν- became -λλ- by assimilation, which remained in Lesbian and Thessalian, but in the other dialects the long (double) consonant was simplified with lengthening of the preceding vowel, cp. 2, as Att. Ion. *στήλη*, Dor. *στάλā*, Lesb. *στάλλā*, from **σταλνā*; Hom. *ἔλομαι* from **ϝελνομai*; *δφείλω* from **ϝοφελνω*; *βουλή*, Lesb. *βόλλā*, from **βολνā*; *βούλομαι* from **βολνομai*. See § 148.

7. Short vowels were lengthened in Ionic, but not in Attic, with the loss of *f* in the combinations *νf*, *λf*, *ρf*, as Ion. *φθάνω*, Att. *φθάνω*, from **φθάνfω*; Ion. *καλός*, Att. *καλός*, Dor. *καλfός*; Ion. *κούρη*, Att. *κόρη*, Dor. *κόρfā*; and similarly Ion. *είνατος*, *στεινός*, *ξείνος*, *τίνω*, *φθίνω*, *δουρός*, *ούρος*, *γούνα*, beside Att. *ἐνατος*, *στενός*, *ξένος*, *τίνω*, *φθίνω*, *δορός*, *ὅρος*, *γόνατα*. See § 124, 6.

THE SHORTENING OF LONG VOWELS.

§ 70. Long vowels were shortened in prim. Greek before a following nasal, liquid, or semivowel + consonant, as third pers. plural *ἔβαν* from **ἔβαντ*, *ἔτλαν* from **ἔτλαντ*, *ἔμιγεν* from **ἔμιγηντ*, *ἔγνον* from **ἔγνωντ*, *ἔψυν* from **ἔψυντ*, beside first pers. sing. *ἔβην*, Dor. *ἔβᾶν*, *ἔτλην*, Dor. *ἔτλαν*, *ἔμιγην*, *ἔγνων*, *ἔψυν*; forms like Hom. *πλῆντο*, *ἀηνται*, *ἔμπληντο* for **πλαντο*, **ἀενται*, *-*πλεντο* were new formations with the long vowel levelled out from the other persons; acc. pl. *χώρᾶς* from -*ᾱνς* (§ 69), older -*ᾱνς*; *μεῖς*, *month*, from **μένς*, older **μήνς*, cp. Lesb. gen. *μῆννος* from **μήνσος*; *πτέρνα* from **πτηρσνα*, cp. Skr. *pārśṇih*, *heel*; in participles like *ἀέντ-*, *γνόντ-* from **ἀFηντ-* (cp. *ἄηστi*, Skr. *vāti*, *he blows*), **γνώντ-*. For examples of the shortening of long vowels before a semivowel + consonant, see § 63.

§ 71. Long vowels were shortened before long vowels especially in Attic and Ionic and partly also in Doric.

There was also a tendency to shorten them before short vowels in Ionic and Doric, but the exact conditions under which the shortening took place are difficult to determine, see Brugmann, *Griech. Grammatik*, pp. 56-7. Examples are:—*ἐώς*, Hom. *ἡώς*; Lesb. *αὔως* from *ἀνσως, cp. Lat. *aurōra*; *θέᾶ*, Dor. *θάᾶ*; Att. *νεῶν*, Hom. *νηῶν*, Skr. *nāvām*; Att. *βασιλέων*, Hom. *βασιλῆων* from -ηϝων. Ion. Dor. *βασιλέος* beside Hom. *βασιλῆος*.

§ 72. The combinations *ηο*, *ηᾳ* became *εω*, *εᾳ* in prim. Attic and Ionic, but in later Ionic the law was greatly obscured by various new formations due to analogy and by dialectal differences within Ionic itself, as gen. Att. *νεώς*, Hom. *νηός*, Skr. *nāvāḥ*; *βασιλέως*, Hom. -*ηός*, Cyprian -*ηῆος*; *πόλεως*, Hom. *πόληος*; nom. *λεώς*, *νεώς*, Hom. *λάός*, Dor. *νάός*; acc. *βασιλέᾳ*, Hom. *βασιλῆᾳ*. Hom. *στέωμεν*, *τέως* beside *στήομεν*, *τῆος*.

ASSIMILATION OF VOWELS.

§ 73. The vowel in an originally unaccented syllable was often assimilated either partially or entirely in quality to the vowel of the following syllable. The examples occur mostly on inscriptions in the various dialects, and show how valuable inscriptional forms are for philological purposes as compared with the forms in ordinary literature.

α to *ε* before a following *ε*, as Att. *ἐρετή* beside *ἀρετή*; *ἐγχέλυνος* from *ἀγχέλυνος, cp. Lat. *anguilla*; Boeot. *τρέπεδδα*, cp. Att. *τράπεζα*.

α to *ε* before a following *ο* and *ω*. This assimilation of *α* to *ε* probably took place in prim. Greek, but owing to levelling the *α* was mostly restored again, cp. *ἡβέω* beside *ἡβάω* with *α* from *ἡβάεις*, &c., and conversely *ἡβέεις*, *ἡβέει* with *ε* from *ἡβέω*, *ἡβέομεν*; Hom. *μενούνεον* : *μενοινά*, *δμόκλεον* : *δμόκλα*, *οῦδεος* : *οῦδας*; Herod. *δρέω* : *δρᾶς*; and similarly on inscriptions of the Cretan, Elean and North-Western dialects.

α to σ before a following σ and ω , as $\delta\sigma\chi\mu\sigma$ from * $\delta\alpha\chi\mu\sigma$; $\kappa\chi\omega\nu$ from * $\kappa\alpha\chi\omega\nu$; $\delta\mu\sigma\gamma\gamma\mu\mu$, cp. $\delta\mu\epsilon\rho\gamma\omega$; Att. $\ddot{\alpha}\rho\rho\omega\delta\epsilon\nu$ beside Ion. $\dot{\alpha}\rho\rho\omega\delta\epsilon\nu$; $\sigma\omega\omega\nu\sigma$ beside $\sigma\omega\omega\nu\delta\epsilon\nu$; $\sigma\omega\omega$ beside $\sigma\alpha\phi\alpha$; Arcad. $\dot{\epsilon}\kappa\sigma\delta\nu$ from $\dot{\epsilon}\kappa\sigma\delta\omega\nu$.

ϵ to α before a following α , as late Att. $\lambda\alpha\kappa\alpha\eta=\lambda\epsilon\kappa\alpha\eta$; Att. $\Sigma\alpha\rho\pi\sigma$ beside $\Sigma\epsilon\rho\pi\sigma$; Corinth. $F\alpha\kappa\beta\bar{a}$, Att. $\epsilon\kappa\beta\eta$; Heracl. gen. $\chi\alpha\rho\delta\epsilon\sigma$, cp. Hom. nom. $\chi\epsilon\rho\delta\sigma$; Arcad. $M\alpha\lambda\alpha\kappa\mu\bar{a}$ beside $M\epsilon\lambda\alpha\kappa\mu\bar{a}$; $\psi\alpha\kappa\alpha$ beside $\psi\epsilon\kappa\alpha$.

ϵ to σ before a following σ and ω , as $\delta\sigma\omega\sigma$, $\ddot{\delta}\rho\sigma\beta\sigma$ = $\delta\beta\omega\sigma$, * $\ddot{\epsilon}\rho\sigma\beta\sigma$; $O\rho\chi\mu\epsilon\omega\sigma$ beside $E\rho\chi\mu\epsilon\omega\sigma$; $T\sigma\omega\eta\eta$, $T\rho\phi\omega\eta\eta$ beside $T\epsilon\omega\eta\eta$, $T\rho\phi\omega\eta\eta$.

ϵ to σ before a following ν , as $\gamma\sigma\gamma\gamma\mu\sigma\alpha$ from * $\gamma\epsilon\gamma\gamma\mu\sigma\alpha$; $\kappa\sigma\mu\omega\sigma\omega\sigma$ beside $\kappa\epsilon\mu\omega\sigma\omega\sigma$ (Hesych.); $\delta\sigma\gamma\mu\sigma\omega\sigma$ from * $\delta\epsilon\mu\sigma\omega\sigma$; $K\sigma\kappa\mu\sigma\alpha$ beside $K\epsilon\kappa\mu\sigma\alpha$.

σ to α before a following α , as $\dot{\alpha}\sigma\tau\alpha\kappa\sigma\delta$, $\dot{\alpha}\sigma\tau\alpha\phi\sigma\delta$ = $\dot{\alpha}\sigma\tau\alpha\kappa\sigma\delta$, $\dot{\alpha}\sigma\tau\alpha\phi\sigma\delta$.

ι to ν before a following ν , as Att. inscription $\dot{\eta}\mu\sigma\sigma\sigma\omega$ = $\dot{\eta}\mu\sigma\sigma\sigma\omega$; $K\iota\omega\mu\epsilon\omega\sigma$ beside $K\iota\omega\mu\epsilon\omega\sigma$.

ν to ι before a following ι , as $\beta\iota\beta\lambda\iota\omega$ from $\beta\nu\beta\lambda\iota\omega$.

For a detailed treatment of vowel assimilation in Greek see J. Schmidt, *Kuhn's Zeitschrift*, vol. xxxii, pp. 321–94.

§ 74. The change of α to ϵ after ι and ν is also due to partial assimilation in such double forms as $\iota\epsilon\epsilon\sigma\omega$, $\sigma\kappa\iota\epsilon\sigma\omega$, $\psi\iota\epsilon\theta\sigma\omega$, $\chi\lambda\iota\epsilon\sigma\omega$, $\phi\iota\epsilon\ell\sigma\omega$, $\pi\iota\epsilon\xi\sigma\omega$, $\pi\iota\epsilon\epsilon\sigma\omega$, $\mathring{\nu}\iota\epsilon\sigma\omega$, beside $\iota\alpha\sigma\omega$, $\pi\alpha\sigma\omega$, &c.

EPENTHESIS.

§ 75. In the combinations α , $\sigma+\nu\jmath$, $\rho\jmath$, $f\jmath$ the \jmath palatalized the preceding consonant and then disappeared. The palatal element in the consonant then combined with the preceding vowel to form a diphthong, as $\beta\alpha\iota\omega$ from * $\beta\alpha\eta\jmath\omega$ older * $\beta\alpha\mu\jmath\omega$, Indg. * $g\eta\mu\jmath\sigma$, cp. Lat. *venio*, Goth. *qima*, *I come*; $\phi\alpha\iota\omega$ from * $\phi\alpha\eta\jmath\omega$; fem. $\tau\acute{e}ktai\omega\sigma$ from * $\tau\acute{e}ktan\jmath\sigma$, and similarly $\mu\acute{e}lai\omega\sigma$, $\tau\acute{a}lai\omega\sigma$, $\lambda\acute{e}ai\omega\sigma$; Att. $\dot{\alpha}\gamma\kappa\omega\sigma$ from

*ἀγκονία. *σπαίρω* from *σπαρίω, Indg. *sprjō̄; θαιρός from *θερήσος, Indg. *dhwṛjōs, *hinge of a door*; μοῖρα from *μορία, cp. μόρος, δαίω from *δαιϝω older *δαϝjω, and similarly καίω, κλαίω. See § 129, 3.

§ 76. The combinations *ασj*, *οσj*, *εσj*, *υσj* became *αι*, *οι*, *ει*, *υι* (through the intermediate stage *ahj*, &c.), and then the second element of the diphthong partly disappeared in Attic and Ionic before a following *o*, as Hom. λιλαίομαι from *λιλασjομai; νάιω from *νασjω, cp. aor. νάσ-σαι; Hom. τοῦ, Skr. tásya; Hom. ἐμεῖο, from *ἐμεσjο; opt. εἴην from *έσjην, Skr. sýam; Hom. τελείω, τελέω, Att. τελῶ, from *τελεσjω; ἀλήθεια from *ἀλᾶθεσjα, cp. ἀληθής, -ēs; pf. part. fem. Hom. ἰδνīa from *Fidnusjā = Skr. vidūṣī. See § 129, 9.

PROTHESIS.

§ 77. It used to be assumed that prothesis took place in Greek before an initial liquid, nasal or *f* + vowel, but most scholars are now generally agreed that a prophetic vowel was only developed in the initial combination Indg. *r* + vowel, as ἔρεβos, Skr. rájaḥ, Goth. riqis, *darkness*; ἔρυθρós, Skr. rudhiráḥ, Lat. ruber, OE. rēad, *red*; ὁρέγω beside Lat. rego. Even in these examples it is not improbable that the initial vowel represents a phase of ablaut which has not been preserved in these and similar words in the other Indg. languages. Forms like ἀλείφω beside λίπos; ἀλίνω beside Lat. lino; ἀμέλγω beside Lat. mulgeo; ἀνήρ beside Skr. nár-, *man*; ὅνομα beside Lat. nōmen; ἀ(f)ησi beside Skr. vāti, *he blows*; Hom. ἐ(f)έρση beside ἔρση; which were formerly regarded as containing a prophetic vowel, represent a different grade of ablaut.

ANAPTYXIS.

§ 78. By anaptyxis is meant the development of a vowel between a liquid or nasal + a preceding or following consonant. Vowels of this kind are found in the old and

modern periods of most of the Indg. languages. No sure examples occur in classical Greek, but they are not altogether uncommon on inscriptions, &c., as Attic (Vase) Ἐρεμῆς, Τέροπων for Ἐρμῆς, Τέρπων; βαράγχος (Hipponax) for βράγχος, τόρονος (quoted by Hesychius for Tarentum) beside τόρνος, σκόροδον beside σκόρδον. Cp. Lat. *pōculum*, *pōculum* beside *pōclum*, French *canif* beside English *knife*, mod. northern dial. *stərək*, *stāk* beside Old English *styric*, *styrc*, *calf*; *filəm*, *marəbl* beside standard English *film*, *marble*.

VOWEL-CONTRACTION.

§ 79. In treating of vowel-contraction it is necessary to distinguish three periods : (1) contractions which took place already in the Indg. parent language, (2) those which took place in primitive Greek, and were accordingly common to all the Greek dialects, and (3) those which took place in the individual dialects.

To treat in detail the question of vowel-contraction in the first period would be beyond the plan and scope of this grammar, because the resultant long vowels or diphthongs were not merely common to Greek, but to all the Indg. languages. It will therefore be sufficient to give here only a few examples of such contractions :—

e + e > ē, as ḷa, Skr. ásam, from *ésm̥, older *e (augment) + esm̥, *I was*.

o + a > ð in the dat. sing. of o-stems, as θεῷ from *dhweso + ai, cp. the original ending preserved in infinitives like ὡθμεναι, Skr. vidmánē, *to know*; Att. δοῦναι, Cypr. δοφεναι, Skr. dāvánē, *to give*.

o + e > ð in the nom. pl. of o-stems, as Skr. výkāḥ, Goth. wulfōs, from *wļqōs, older *wļqo + es, *wolves*, cp. πατέρες.

ā + e > ā in the nom. pl. of ā-stems, as Skr. výkāḥ, *she-wolves*, from *wļqā + es.

ā + a > ā in the dat. sing. of ā-stems, as θēā, cp. Goth. gibái, *for a gift*, Indg. ·ā + ai.

Most of the contractions were due to the loss of intervocalic s (through the intermediate stage h) and j in primitive Greek. After the loss of these consonants the combinations ā, ē, ð + ī or ū were contracted in certain cases in the prehistoric period of all the dialects. The loss of intervocalic f took place at a much later period, and accordingly belongs to the history of the separate dialects (§ 122). But the great majority of vowel-contractions took place after primitive Greek became differentiated into the various separate dialects. Vowels were contracted in Attic more extensively than in any of the other dialects, although even in this dialect there were certain combinations which did not undergo contraction in all cases:—

(1) The combinations εο, εω, εα, where an intervocalic s or j had disappeared, remained in dissyllables, but underwent contraction in words of more than two syllables, as θeos from *θfεσos, but Θoύphiλos, Θoύφραστos ; ξéω from *ξéσω, but ξoῦμεν, ξoῦσι ; ἔap from *fέσap, but gen. ἥpos from *fέσapos ; δeos from *δfέjos ; δéω from *δéjω, I bind, but δoῦμεν, δoῦσi. But when the same combinations arose after the loss of f they remained uncontracted in older Attic even in words of more than two syllables, as νé(f)os, νe(f)oχμós, gen. ἥδé(f)os, πλé(f)oμεν ; ἔωs, Hom. ἥos, Dor. ἄs, from *ἄfos, until ; βaσιλéωs, Hom. -ῆos, Cypr. -ῆfos ; ἥδé(f)aωn ; κρé(f)aς, ἐν्नé(f)a, νe(f)aρós, ἥδé(f)a. In like manner the combinations aη, eou, oa remained uncontracted after the loss of f, as ἀ(f)ηδáν, χó(f)aνos, χo(f)άνη, gen. Περικλéous, from *-κλéfεσos.

(2) The combinations εα, εω were contracted when preceded by i, but remained in other cases, as acc. ἀλιᾶ, ἀλιᾶs, beside βaσιλéā, -έᾶs ; gen. ἀλιῶs, ἀλιῶn, beside βaσιλéωs, -έωn.

§ 80. Below is given a classification of the contractions arranged according to the nature of the first vowel.

$\alpha + \alpha > \bar{\alpha}$ in all the dialects, as Hom. Ion. $\ddot{\alpha}\tau\eta$ from * $\dot{\alpha}\mathbf{f}\acute{\alpha}\tau\bar{\alpha}$; Hom. $\delta\acute{e}\pi\bar{\alpha}$ from * $\delta\acute{e}\pi\alpha\sigma\alpha$; $\tau\bar{\alpha}\lambda\lambda\alpha = \tau\bar{\alpha} \mathring{\delta}\lambda\lambda\alpha$.

$\alpha + \epsilon > \bar{\alpha}$ in Att. Ion., but η in Dor., as $\ddot{\alpha}\kappa\omega\nu$ from $\dot{\alpha}\acute{\epsilon}\kappa\omega\nu$; $\dot{\alpha}\rho\bar{\omega}$ from $\dot{\alpha}\acute{\epsilon}\rho\bar{\omega}$; Att. Ion. $\tau\bar{\iota}\mu\acute{\alpha}\tau\epsilon$, Dor. $\tau\bar{\iota}\mu\acute{\eta}\tau\epsilon$ from $\tau\bar{\iota}\mu\acute{\alpha}\epsilon\tau\epsilon$; Dor. $\delta\rho\eta$ from $\delta\rho\alpha\epsilon$.

$\alpha + i > ai$, as $\pi\alpha\bar{i}\sigma$ from * $\pi\acute{\alpha}\mathbf{f}\iota\sigma$; $\alpha i\sigma\theta\acute{\alpha}\nu\mathbf{o}\mu\mu\alpha i$ from * $\dot{\alpha}\mathbf{f}\iota\sigma\theta\acute{\alpha}\nu\mathbf{o}\mu\mu\alpha i$; $\gamma\acute{e}\rho\alpha i$ from $\gamma\acute{e}\rho\alpha\iota\iota$.

$\alpha + o > \omega$ in Att. Ion., but $\bar{\alpha}$ in Dor. Aeol. and Elean, as $\dot{\alpha}\gamma\acute{\eta}\rho\omega s$, Hom. $\dot{\alpha}\gamma\acute{\eta}\rho\alpha\omega s$; $\delta\rho\bar{\omega}$ from $\delta\rho\alpha\omega$; $\tau\bar{\iota}\mu\bar{\omega}\mu\mu\epsilon\nu$ from $\tau\bar{\iota}\mu\acute{\alpha}\mu\mu\epsilon\nu$; Dor. (Theocritus) $\acute{\epsilon}\pi\acute{\alpha}\bar{\xi}\bar{\alpha}$ from - αo ; Boeot. $\phi\bar{\iota}\sigma\bar{\alpha}\bar{n}\tau\epsilon s$ from - $\alpha\bar{\alpha}\nu\tau\epsilon s$.

$\alpha + u > au$, as $\delta\alpha\bar{n}\bar{\omega}s$ from * $\delta\alpha\sigma\bar{n}\bar{\omega}s$, Indg. * $\delta\bar{n}\bar{s}\bar{u}\bar{l}\bar{o}\bar{s}$.

$\alpha + \bar{\alpha} > \bar{\alpha}$ in all the dialects, as $\beta\acute{e}\beta\acute{\alpha}\sigma i$, $\iota\acute{s}\bar{t}\bar{\alpha}\sigma i$, from - $\alpha\bar{\alpha}\sigma i$.

$\alpha + \eta > \bar{\alpha}$ in Att. Ion., but η in Dor. Locr., as subj. $\tau\bar{\iota}\mu\acute{\alpha}\tau\epsilon$, Dor. $\tau\bar{\iota}\mu\acute{\eta}\tau\epsilon$, from $\tau\bar{\iota}\mu\acute{\alpha}\mu\epsilon\tau\epsilon$; Ion. $\dot{\alpha}\delta\bar{\eta}\bar{\varsigma}$ from $\dot{\alpha}\eta\delta\bar{\varsigma}$.

$\alpha + \gamma > \bar{\alpha}$, as subj. $\tau\bar{\iota}\mu\bar{\gamma}$ from $\tau\bar{\iota}\mu\acute{\gamma}$.

$\alpha + \omega > \omega$, as $\tau\bar{\iota}\mu\bar{\omega}$ from $\tau\bar{\iota}\mu\acute{\omega}$.

$\alpha + ei$ (= $\bar{\epsilon}$) $> \bar{\alpha}$ in Att., as $\phi\bar{\alpha}\bar{n}\bar{\omega}s$, Ion. $\phi\alpha\epsilon\iota\bar{n}\bar{\omega}s$, from * $\phi\acute{a}\mathbf{f}\epsilon\sigma\bar{n}\bar{\omega}s$; $\ddot{\alpha}\rho\bar{\alpha}\bar{s}$ from $\dot{\alpha}\acute{\epsilon}\rho\bar{\alpha}\bar{s}$.

$\alpha + ei$ (= prim. Gr. ϵi) $> \bar{\alpha}$ in Att. Ion., but η in Dor., as $\dot{\alpha}\bar{\delta}\bar{\omega}$ from * $\dot{\alpha}(F)\epsilon\bar{\delta}\bar{\omega}$; indic. $\tau\bar{\iota}\mu\bar{\gamma}$ from $\tau\bar{\iota}\mu\acute{\alpha}\epsilon i$; Dor. $\delta\bar{\rho}\bar{\eta}$ from $\delta\rho\acute{\alpha}ei$.

$\alpha + oi > \varphi$, as $\dot{\alpha}\bar{\delta}\bar{\eta}$ from $\dot{\alpha}(F)o\iota\bar{\delta}\bar{\eta}$; $\tau\bar{\iota}\mu\bar{\varphi}$, $\tau\bar{\iota}\mu\bar{\varphi}\mu\mu\epsilon\nu$, from $\tau\bar{\iota}\mu\acute{\alpha}\mu\mu\epsilon\nu$, $\tau\bar{\iota}\mu\acute{\alpha}\mu\mu\epsilon\nu$.

$\alpha + ou > \omega$, as $\dot{\alpha}\bar{\tau}\bar{\iota}\bar{\mu}\bar{\omega}s i$, from $\dot{\alpha}\acute{\tau}\bar{\iota}\bar{\mu}\acute{\alpha}\mu\mu\epsilon\nu$, $\tau\bar{\iota}\mu\acute{\alpha}\mu\mu\epsilon\nu$.

$\epsilon + \alpha > \eta$, as gen. $\dot{\eta}\bar{\rho}\bar{\omega}s$ from * $\mathbf{f}\acute{e}\sigma\bar{\alpha}\rho\bar{\omega}s$; $\gamma\acute{e}\nu\eta$ from * $\gamma\acute{e}\nu\epsilon\sigma\alpha$.

$\epsilon + e > ei$ (= long close $\bar{\epsilon}$) in Att. Ion. and mild Dor., but η in Aeolic and severe Dor., as $\phi\bar{\iota}\bar{\lambda}\bar{\epsilon}i$, severe Dor. $\phi\bar{\iota}\bar{\lambda}\eta$, from $\phi\bar{\iota}\bar{\lambda}\acute{\epsilon}\epsilon i$; $\epsilon\bar{\iota}\bar{\chi}\bar{o}n$, Lesb. severe Dor. $\dot{\eta}\bar{\chi}\bar{o}n$, from $\acute{\epsilon}\acute{\epsilon}\bar{\chi}\bar{o}n$; $\tau\bar{\rho}\bar{\epsilon}\bar{\iota}s$, Lesb. $\tau\bar{\rho}\bar{\eta}\bar{\varsigma}$, from * $\tau\bar{\rho}\acute{\epsilon}\acute{\epsilon}\bar{\iota}\bar{\varsigma}$.

$\epsilon + i > ei$, as $\epsilon\bar{\iota}$ from * $\acute{\epsilon}\acute{\epsilon}i$ = Skr. $\acute{a}\bar{s}i$; $\pi\bar{\o}\bar{l}\bar{\epsilon}i$ from $\pi\bar{\o}\bar{l}\acute{\epsilon}i$; $\gamma\acute{e}\nu\epsilon i$ from * $\gamma\acute{e}\nu\epsilon\sigma i$.

$\epsilon + o > ou$ (= $\bar{\o}$, later \bar{u}) in Att., ω in Dor., and ϵu in Ion. and Boeot., as Att. $\gamma\acute{e}\nu\epsilon\bar{o}u s$ from * $\gamma\acute{e}\nu\epsilon\sigma\bar{o}u s$; $\delta\bar{o}\bar{u}\mu\mu\epsilon\nu$ from

*δέյομεν; Θούφιλος beside θεός; Dor. ἐμῶς from ἐμέος; εὐχαριστῶμες from -έομες; Ion. Boeot. βέλευς from βέλεος older *βέλεσος.

ε + ā > εη > η in Ion. (§ 51), as βορῆς, νῆ = βορέᾶς, νέā.

ε + ᾳ > εῃ > η in Ion., as dat. γενῆ = Att. γενεᾱͅ.

ε + η > η in all the dialects, as φιλῆτε from φιλέητε; Περικλῆς from -έης.

ε + η > η, as φιλῆ from φιλέη.

ε + ω > ω in Att., as φιλῶ, ἀλιῶς, beside Ion. φιλέω, ἀλιέως.

ε + αι > η, as indic. mid. φέρη from φέρε(σ)αι = Skr. bhárasē.

ε + ει (= ē, § 58) > ει (= long close ē), as κλεινός from *κλεεινός, older *κλεεινος.

ε + ει (= prim. Gr. ει) > ει, as φιλεῖ from φιλέει.

ε + οι > οι in Att., as φιλοῖ, φιλοίμεν, from φιλέοι, φιλέοιμεν.

ε + ου > ου, as φιλοῦ, φιλοῦσι, from φιλέου, φιλέουσι.

ι + ι > ι, as Δῑ from Διφί, Att. Διί had its ι from the genitive.

ο + α > ω, as αἰδῶ from αἰδόα, Indg. *aidosm̥; ὥτα from δάτα; Δημῶναξ from Δημό-+αναξ.

ο + ε > ου in Att. Ion. mild Dor., but ω in severe Dor., as μισθοῦτε, severe Dor. -ώτε, from -όετε; λουτρόν from λοετρόν; Att. ἐλάττους, Ion. ἐλάσσους, Dor. ἐλάσσως, from -οες, Indg. *.oses.

ο + ι > οι, as κοῖλος from *κοφίλος; οῖς from *δφις = Lat. ovis, Skr. ávih.

ο + ο > ου in Att. Ion. and mild Dor., but ω in Aeol. and severe Dor., as νοῦς from νόος; λύκου, Boeot. Lesb. severe Dor. λύκω; μισθοῦντες, severe Dor. -ώντες, from -όντες.

ο + η > ω, as δηλώτε from δηλόητε; Ion. βωθέω = βοηθέω.

ο + η > οι, as subj. δηλοῖς, δηλοῖ, from -όη.

ο + ω > ω in all the dialects, as δηλῶ from δηλόω, δηλώμεν from δηλόωμεν.

ο + ῳ > ῳ in all the dialects, as ἀπλῷ from ἀπλόῳ.

$\circ + \epsilon$ (= long close ē) > $\circ\nu$, as δηλοῦν from δηλόειν, οἰνοῦς from οἰνόεις.

$\circ + \epsilon$ (= prim. Gr. ει) > οι, as δηλοῖ from δηλόει ; οἴγω beside Lesb. inf. ὁφείγην.

$\circ + \circ i$ > οι, as δηλοῖς, δηλοῖτε, from δηλόις, δηλόιτε ; εῦνοι from εὔνοοι.

$\circ + \circ u$ > ου, as νοῦ from νόου, δηλοῦσι from δηλόουσι ; σοῦμαι from σοοῦμαι, older *σοφόμαι.

$v + v$ > ὑ, as Att. (inscription) ὕς = ὕς.

$\bar{\alpha} + \alpha$ > ἄ, Att. λᾶς beside Hom. λαᾶς ; Dor. γâ from *γâa.

$\bar{\alpha} + \epsilon$ > ἄ in Dor. and Aeol., as Dor. ἄλιος, Lesb. ἄλιος from ἄέλιος ; Dor. φωνᾶντα from φωνάεντα.

$\bar{\alpha} + i$ > ἄ, η, as ράτερος, ρῆτερος from ρᾶτ̄τερος, ρῆτ̄τερος ; θνήσκω from *θνᾶίσκω ; γράδιον from γρᾶ-ίδιον.

$\bar{\alpha} + o$ > ηο, εω (§ 72) in Att. Ion., but ἄ in Dor. and Aeol., as Hom. ἥος, Att. ἔως, Dor. Boeot. ἄς, from ἄος, until ; gen. Ἀτρείδεω, Dor. -ἄ ; Dor. Lesb. εὐεργέτā from -ἄο. See § 323.

$\bar{\alpha} + \bar{\alpha}$ > ἄ in all the dialects, as Ἀθηνᾶ from -ἄἄ ; gen. Dor. γᾶς from -ἄᾶς, cp. § 323.

$\bar{\alpha} + \dot{\alpha}$ > ἄ, as dat. Dor. γâ from *γᾶά.

$\bar{\alpha} + \omega$ > ἄ in Dor. and Aeol., gen. pl. τᾶν, Att. τᾶν, from τᾶῶν, older *τᾶσων = Skr. tâsām.

$\eta + \epsilon$ > η in all the dialects, as βασιλῆς from -ῆfes ; Ion. acc. τῖμῆντα from τîμήεντα.

$\eta + \eta$ > η in all the dialects, as Att. subj. ζῆτε, φανῆτε, from *ζήητε, *φανήητε.

$\eta + \eta$ > η in all the dialects, as Att. subj. ζῆ from *ζηη.

$\eta + \epsilon$ (= long close ē) > η in Att. Ion. and mild Dor., as Ion. nom. τῖμῆς from τîμήεις.

$\eta + \epsilon$ (= prim. Gr. ει) > η in all the dialects, as Att. ζῆ from *ζήει ; ηδη from *ἡfειδη.

$\omega + \alpha$ > ω in Att. Lesb., but ἄ in Dor. and Boeot., as Att. Lesb. πρᾶτος, Dor. Boeot. πρᾶτος, from *πράϝατος ; ηρω from ηρωα ; ὄναξ = ὄ ἄναξ.

$\omega + \epsilon > \omega$, as $\eta\rho\omega s$ from $\eta\rho\omega\epsilon s$; Att. $\rho\bar{\iota}\gamma\hat{\omega}\tau\epsilon$ from $-\omega\epsilon\tau\epsilon$.

$\omega + i > \varphi$, as $\eta\rho\varphi$ from $\eta\rho\omega i$.

$\omega + o > \omega$ in all the dialects, as $\sigma\hat{\omega}s$ from $\sigma\hat{\omega}os$; $\rho\bar{\iota}\gamma\hat{\omega}n\tau\epsilon s$ from $-\omega\omega\tau\epsilon s$.

$\omega + \eta > \omega$, as subj. $\rho\bar{\iota}\gamma\hat{\omega}\tau\epsilon$ from $-\omega\eta\tau\epsilon$.

$\omega + \eta > \varphi$, as subj. $\rho\bar{\iota}\gamma\hat{\varphi}$ from $-\omega\eta$.

$\omega + \omega > \omega$ in all the dialects, as $\rho\bar{\iota}\gamma\hat{\omega}$ from $\rho\bar{\iota}\gamma\hat{\omega}\omega$; subj. $\acute{\alpha}\lambda\hat{\omega}\mu\epsilon\nu$ from $\acute{\alpha}\lambda\hat{\omega}\omega\mu\epsilon\nu$.

$\omega + \epsilon i$ (= prim. Gr. ϵi) $> \varphi$, as $\rho\bar{\iota}\gamma\hat{\varphi}$ from $\rho\bar{\iota}\gamma\hat{\omega}\epsilon i$.

$\omega + o i > \varphi$, as $\rho\bar{\iota}\gamma\hat{\varphi}\epsilon\nu$ from $*-\omega\omega i\epsilon\nu$.

$\omega + o u > \omega$, as $\rho\bar{\iota}\gamma\hat{\omega}\sigma\alpha$ from $-\omega\omega u\sigma\alpha$.

CHAPTER IV

ABLAUT

§ 81. Up to this point we have treated the Indg. vowels and their equivalents in the more important languages without any reference to the manner in which these vowels stand to each other in any one language. It now remains to illustrate and formulate the manner in which they stand to each other, or in other words to discuss the phenomenon of what is called ablaut or vowel gradation. And for this purpose we shall confine our examples almost entirely to Greek, partly because it is the language which concerns us most intimately in this book and partly because, having preserved the Indg. vowels more faithfully than any other language, it is best fitted to illustrate the various phenomena of ablaut.

§ 82. By ablaut or vowel gradation is meant such quantitative, qualitative and accentual differences in the vocalic elements of groups of etymologically and morphologically related words as were caused by sound-laws which operated in the prim. Indg. language before it

became differentiated into the separate languages. Such are e.g. the differences in the root-syllables of *λείπω* : *λέλοιπα* : *ἔλιπον*, *πέτομαι* : *ποτέομαι* : *ἐπτόμην*, *φέρω* : *φόρος* : *φάρ* : *φαρέτρα* : *δί-φρος*, Lat. *pedem* : *πόδα* : Lat. *pēs* : Dor. *πώς* : *ἐπί-βδαι*. *ἄγω* : *δύμος*. *ρήγνυμι* : *ἔρωγα* : *φαγῆναι*. *δί-δω-μι* : Lat. *datus* : Skr. *da-d-máḥ*, *we give*. Dor. *φᾶμί* : *φωνή* : *φαμέν*. Examples in other than root-syllables are *λύκε* : *λύκον* : Goth. *wulfōs*, *wolves*, *φέρετε* : Dor. *φέροντι*, *ποιμένα* : *δαίμονα* : *ποιμήν* : *δαίμων* : *ποίμνη*, *πατέρες* : *εὐ-πάτορες* : *πατήρ* : *εὐ-πάτωρ* : *πατρός*, *δυσμενές* : *δυσμενής*, *πόλις* : *πόλεις* from **πολεῖες*, *δοτήρ* : *δώτωρ*.

§ 83. According as the vowels which stand in ablaut relation to each other differ in quality or in quantity only, or both in quality and quantity, we have what is called qualitative, quantitative or qualitative-quantitative ablaut.

Qualitative ablaut only occurs in syllables which have the strong grade of ablaut and is for the most part confined to the interchange of *e*:*o* and of *ē*:*ō* in the *e*-series of ablaut (§ 96), as *φέρω* : *φόρος*, *λείπω* : *λέλοιπα*, *πατήρ* : *εὐ-πάτωρ*. *ἄγω* : *δύμος*. *ρήγνυμι* : *ἔρωγα*. Dor. *φᾶμί* : *φωνή*. It is most difficult to account for this phase of ablaut. The interchange between *e* and *o* and between *ē* and *ō* seems to have been so regulated that *ē* originally stood in the chief-accented syllable and *ō* in the next following syllable, as in *φρένες*, *φρήν* : *ἄφρονες*, *ἄφρων*; *πατέρες*, *πατήρ* : *εὐ-πάτορες*, *εὐ-πάτωρ*.

Quantitative and qualitative-quantitative ablaut mostly arose through the loss or weakening of vowels in unaccented syllables, as *ἴ-μεν* : *εἶ-μι* = Skr. *i-máḥ* : *é-mi*, *λιπέν* : *λείπω*, *φυγεῦν* : *φεύγω*, *ἔδρακον* : *δέρκομαι*, *πτέσθαι* : *πέτομαι*, *πατρός* : *πατέρα*, *μίμων* : *μένω*. Lat. *datus* : *δί-δω-μι* = Indg. *ə* : *ō*. *ἴσταμεν* : Dor. *ἴστāμi* = Indg. *ə* : *ā*. The stress accent must have been more predominant than the pitch accent at the time quantitative ablaut came into

existence, because it is only upon this assumption that we are able to account for the weakening and eventual loss of vowels in unaccented syllables. See § 28.

§ 84. Scholars are now generally agreed that the factors which brought about the phenomenon called ablaut were of various kinds. Although the prime factor was doubtless the system of accentuation which prevailed at different periods in the parent Indg. language, there were also several other factors more or less connected with accent, such as vowel-contraction, lengthening of vowels by compensation for the loss of a vowel in the next syllable, rhythmical lengthening (see Wackernagel, *Das Dehnungsgesetz der griech. Composita*), numerous analogical formations, the mixing up of the various ablaut-series through the influence of analogy, &c. And as all these vowel-changes and probably many others connected with ablaut took place long before the separate languages came into existence, it is practically impossible to determine their chronological order or to be certain about the precise nature of some of the vowel-changes. In the following account of ablaut certain more or less problematical details have been omitted as being beyond the scope of this book. The student who wishes to pursue the subject in greater detail should consult Brugmann's *Grundriss*, vol. i, second ed., pp. 482-505, and *Kurze vergleichende Grammatik*, pp. 138-50; Hirt's *Der indogermanische Ablaut* and the excellent epitome in his *Handbuch der griech. Laut- und Formenlehre*, pp. 84-105.

§ 85. From the examples given above (§§ 82-3) it will be seen that ablaut is not confined to what is generally called root-syllables but that it also occurs equally in other syllables. For practical purposes it is convenient to divide words into root-bases and suffix-bases, as in *φέρε-τρον* : Skr. *bharítra-m*, *arm*, *πα-τέρ-α* : *εὐ-πά-τορ-α* : *πα-τήρ* : *εὐ-πά-τωρ* : *πα-τρός*, Dor. *φέρο-μες* : Lat. *feri-mus* (older

.mos), OHG. *bera-mēs*. In the following paragraphs we shall call root-bases simply bases or ablaut-bases, and suffix-bases simply suffixes. Bases or ablaut-bases are mostly monosyllabic or dissyllabic. The monosyllabic bases are called heavy or light according as they contain a long or a short vowel, as *dhē-, *dō-, *bhā- in *τίθη-μι*, *δίδω-μι*, Dor. *φᾶ-μι*; *es-, *ei- in *ἔσ-τι*, *εῖ-μι*. The dissyllabic bases are called heavy when the first syllable contains a short vowel and the second syllable a long vowel, and light when both syllables contain a short vowel, as *pelē-, *fill*, *genō-, *know*, *petā-, *fly*, see § 458; *leiqe-, *leave*, in *λείπε-τε* : *λιπεῖν*. The bases underwent numerous vowel-changes owing to the operation of various sound-laws which took place in the prim. Indg. period. The more important of these changes were :—

I. THE WEAKENING OR LOSS OF VOWELS.

§ 86. Vowels were weakened or disappeared in syllables which did not have the chief accent of the word. Such syllables are said to have the weak grade of ablaut. The weak grade is subdivided into weak grade 1 (wg. 1) and weak grade 2 (wg. 2) according as the syllable in which it occurs originally had the secondary accent or was unaccented. In the former case short vowels merely became reduced in quality (generally written e, o, a) and long vowels became reduced in quality and quantity (generally written ο, § 49), whereas in the latter case both short and long vowels disappeared through the intermediate stage of reduced vowels. At a later period in the parent Indg. language the reduced short vowels e, o, a regained their full quality again and thus fell together with the original strong grade vowels e, o, a. When the vowel e entirely disappeared in diphthongs (ei, eu, em, en, el, er) the second element of the diphthong became vocalic or re-

mained consonantal according as it was followed by a consonant or a vowel in the next syllable.

§ 87. Long vowels were reduced to $\bar{\alpha}$ (= Aryan i but a in the other languages) or disappeared in the heavy ablaut-series (§ 49), as $\theta\epsilon\tau\circ s$ for * $\theta\alpha\tau\circ s$ (§ 49, note), Skr. hitáḥ, Indg. *dhētós : $\tau\acute{i}\text{-}\theta\eta\text{-}mu$, λαγαρός : λήγω, ραγῆναι : ρήγνυμι ; δοτós for * $\delta\alpha\tau\circ s$ (§ 49, note), Lat. datus, Skr. á-dita = ē-doto : $\delta\acute{i}\text{-}\delta\omega\text{-}mu$, Lat. dōnum ; στατός, Skr. sthitáḥ, Lat. status, Indg. *stētós : Dor. ἵστα-μι, Lat. stāre, φαμέν : Dor. φᾶμι, Skr. bhávi-tum, Indg. *bhéwə-tum, to be : base *bhewā-. Skr. pl. da-dh-máḥ : sing. dá-dhā-mi, $\tau\acute{i}\text{-}\theta\eta\text{-}mu$, pl. da-d-máḥ : sing. dá-dā-mi, $\delta\acute{i}\text{-}\delta\omega\text{-}mu$, dēvá-ttah, given by the gods, with -ttah from older *-d-tos beside Lat. datus, φύσις beside ē-phū from *é-bhwēt : base *bhewā-.

§ 88. The first element of the long diphthongs ēi, ōi, āi, ēu, ōu, āu was reduced to $\bar{\alpha}$. The ei, eu then became contracted to i, ū before a following consonant already in the prim. Indg. period. But as the second element of long diphthongs often disappeared in the parent language (§ 63) we thus have the ablaut relation i : ē, ō, ā and ū : ē, ō, ā in the earliest historic period of all the languages, as Skr. dhitáḥ, pp., sucked, Lat. filius : θήσατο, he sucked, Lat. fēlāre, σκίπων : σκῆπτρον, πῖθι : πῶμα beside Skr. pāy-áyati, he gives to drink : inf. pātum, to drink ; Skr. mūlam, root : μῶλν, Skr. ūdhar, udder : ōdθap from *aw̄θap (§ 70), mūmāp : μῶμαρ, Skr. mūrāḥ, dull, stupid : μῶρος, Lat. mōrus. When i and ū became unaccented they were shortened to i and u, as ὅβριμος : βρίθω, εὐρί-σκω : εὐρή-σω, χάρις : χαρῆ-nai, ἀλί-σκομαι : ἀλῶ-nai, Lat. di-rūtus : rūtós, πλύσις : πλωτός.

§ 89. In the light ablaut-series the short vowels e, o, a were reduced to voiceless (?) e, o, a or disappeared through the intermediate stage of e, o, a. At a later period in the parent Indg. language the reduced vowels regained their full quality again and thus fell together with the original

strong grade vowels **e**, **o**, **a**, as *πεπτός*, Indg. **peqtós*, gen. sing. Lat. *pedis*, Skr. *padáḥ*, Indg. **pedés*; ὄπτέον from **ooq-* : ὅψομαι; -*ακτός*, Indg. **aktós* : ὅγω. In Greek there are no sure examples of the loss of **o**, **a** in the light ablaut-series. It should also be noted that the above **o** is not the same as the **o** which stands in ablaut relation to **e**, as in *φόρος* : *φέρω*. Examples of the loss of **e** are ἐπτόμην : *πέτομαι*, ἐσπέσθαι : *ἐπομαι* from **σέπομαι*, Skr. pl. s.-máḥ : ás-mi, *I am* = Indg. *s.-més : *éś-mi, ἐπί-βδαι : Lat. *pedem*, ἵζω from **σι-σδώ* : ἔδος from **σέδος*, ἵσχω from **σι-σχω* : ἔχω from **σέχω*.

When the vowel **e** entirely disappeared in the diphthongs ei, eu, em, en, el, er the second element of the diphthong became vocalic or remained consonantal according as it was followed by a consonant or a vowel in the next syllable, as ἵμεν : εἴμι = Skr. imáḥ : émi, λιπεῖν, ἔλιπτον : λείπω; κέχυται : χέ(f)ω, κλυτός : κλέ(f)os, φυγεῖν, ἔφυγον : φεύγω; ἄ-παξ : eīs from **σεμς*; ἄσμενος from **ησμενος* : νέομαι, ἔπαθον : πέ-πονθα, μαίνομαι from **μηγόμαι* : μέ-μονα, μέμανεν : μέ-μονα, φρασί : φρεύνω; ἔκλαπην : κλέπτω; ἔδρακον : δέρκομαι, δεδαρμένος : δέρω, πατράσι, Skr. pitṛṣu : πατέρα. Skr. y-ánti, *they go* : i-máḥ, *we go* = Indg. *j-énti : *i-més; Hom. πείρατα from **περf-ατα* : πρυ-μνός; γί-γνομαι : ἔγένετο, μί-μνω : μένω, νεο-γνός : γένος; δί-φρος : φέρω, πατρός : πατέρα.

§ 90. The combinations **emə**, **enə**, **elə**, **erə** had in heavy bases (§ 97) a threefold development in prim. Greek. They became (1) **áμα**, **áνα**, **áλα**, **áρα** when the first element had the secondary accent, (2) **μā**, **νā**, **λā**, **ρā** (see § 68) when the last element had the secondary accent and the first element disappeared, and (3) **μa**, **νa**, **λa**, **ρa** when neither the first nor the last element had the secondary accent; and (e)jə, (e)wə became ī, ū, as ἔτάλασσα (Hesych.) : τλητός, Lat. *lātus*; θάνατος : θνητός, Dor. θνατός; κάρηνον from **καρασνον* : *κράτός* from **κράστας*; κάματος : κμητός,

Dor. *κρατός*, *νεόδματος* : *δέμας*; *γυνητός*, Lat. (g)nātus; Dor. *λᾶνος*, Lat. lāna. ē-*τμαγον* : *τέμαχος*, *τέτμηκα*; *τέθναμεν* : *θάνατος*; *τέτλαθι* : *τελαμών*, *καχλάξω* : *κέχλαδα*; *στρατός* : ē-*στόρεσσα*. ī-*τέα* : base *wejē-; ē-*φū* : Skr. inf. bhávitum, *to be*, base *bhewā-.

2. THE LENGTHENING OF VOWELS.

§ 91. Several kinds of vowel lengthening took place in the prim. Indg. period, as lengthening by compensation for the loss of a syllable, contraction of vowels and rhythmical lengthening. See Streitberg, *Indogermanische Forschungen*, iii, pp. 305-416.

§ 92. With quantitative ablaut is connected the prim. Indg. lengthening of vowels by compensation for the loss of a syllable. The vowels thus lengthened have what is called the lengthened grade of ablaut (lg.). The vowels in nearly all the examples which have this lengthening belong to the e-series of ablaut. And the lengthened vowels ē, ö are respectively called lg. 1 and lg. 2.

(a) A short accented vowel in an originally open syllable became lengthened if the following syllable entirely disappeared. This occurs especially in the nom. singular of nouns, as Lat. pēs, Dor. πώς from prim. Indg. *pēts, *pōts, *pédes or -os, *pódes or -os, beside acc. pedem, πόδα, Indg. *pédm, *pódm; πατήρ from prim. Indg. *pətére beside πατέρα, Indg. *pətérm; and similarly θήρ : Lat. ferus, κῆρ : base *kéred-, cp. καρδία, ποιμῆν : ποιμένα, φρήν : φρένα, βλάψ : βλέπω, δάίμων : δαίμονα, Hom. ἰδρώς : ἰδρόα, κλάψις : κλοπός, φώρος, ψψ : ὅψομαι.

NOTE.—Also when a short vowel disappeared after a long vowel, as in gen. θεᾶς from an original form *dhwesāso : nom. θεά.

(b) The e was also lengthened in prim. Indg. in the active singular of the s-aorist, as *lēksm from older

*legesm̄, cp. Lat. lēxi : pres. legit; Lat. vēxi, Skr. á-vākṣam : pres. vehit, vāhati. The s-aorist in Greek was a new formation with the vowel from the present, as ē-λεξα, ē-λειψα, but Skr. á-rāikṣam, see § 507.

§ 93. Contraction of the augment with a following vowel, as in ḡa (§ 79), Skr. ásam, Indg. *ésm̄ from older *é-esm̄; ḡa for *ḡa, Skr. áyam, Indg. *ejm̄ from older *é-ejm̄; ḡyov, Dor. ḡyov, Skr. ájam : pres. ḡyw, ájāmi.

The contraction of case-endings with the stem, as -ās from -ā-es in the nom. plural of a-stems; -ōi from -o-ai in the dat. singular of o-stems; -ōs from -o-es in the nom. plural of o-stems, see § 79.

§ 94. Rhythrical lengthening in the first elements of compounds and before suffixes so as to avoid a long succession of short vowels, as πρω-πέρυστι, ιερωσύνη : ιερός, Hom. ἑτέρωθι, ἑτέρωσε, ἑτέρωθεν : ἑτερος.

ABLAUT-SERIES.

§ 95. The vowels vary within certain series of related vowels called ablaut-series. The parent Indg. language had six such series, three light and three heavy, viz.

	sg. 1.	sg. 2.	lg. 1.	lg. 2.	wg. 1.	wg. 2.
I. e-series	é	o	é	ō	e	—
II. o-series	ó	o	ó	ō	o	—
III. a-series	á	o	á	ō	a	—
IV. ē-series	é	ō			ə	—
V. ë-series	ó	ō			ə	—
VI. á-series	á	ō			ə	—

Strong grade 1 is taken as the normal grade in all the series. The three light series have three grades, strong grade, lengthened grade, and weak grade, whereas the three heavy series have only the two grades, strong and weak. The origin of the difference between the strong and the weak grade and between the strong and the

lengthened grade have already been explained in the preceding paragraphs. And some indication of the probable origin of the difference between strong grade 1 and strong grade 2 has been given in § 88, but much still remains obscure about the origin of these qualitative differences.

The first ablaut-series is by far the most important. It is found in many monosyllables and always in the first syllable of dissyllabic heavy bases and in the second syllable of dissyllabic light bases and nearly always in the first syllable of dissyllabic light bases. And one or other grade of this series occurs in nearly all suffixes. The second and third series are exceedingly rare. Apart from a few monosyllabic heavy bases the fourth, fifth, and sixth series only occur in the second syllable of dissyllabic heavy bases, and even here the number of examples is not very great. The ē in the fourth series often came to be regarded as a formative element in prim. Greek and was then extended by analogy to bases to which it did not originally belong, see §§ 458, 506.

§ 96. Many examples of the various grades of ablaut have been given in the preceding paragraphs. In this and the following paragraph are given examples of the various ablaut-series, and of their application to dissyllabic light and heavy bases.

I. The e-series.

sg. 1.	sg. 2.	lg. 1.	lg. 2.	wg. 2.
é	o	é	ō	—
πέδα	πόδα	Lat. pēs	πώς	ἐπί-βδαι
πέτομαι	ποτέομαι		πωτάομαι	ἐπτόμην
ἔπομαι				ἐσπέσθαι
ἔχω				ἴσχω
λόγε	λόγος			
Dor. φέρο-μες		Lat. feri-mus OHG. bera-mēs		

sg. 1.	sg. 2.	lg. 1.	lg. 2.	wg. 2.
φέρε-τε	Dor. φέρο-	ντι		
λείπω	λέλοιπα	Skr. á-rāikṣam		λιπεῖν
πείθω	πέποιθα			πιθέσθαι
εἴδομαι	οἶδα			ἰδμεν
εἶμι				ἴμεν
ρέ(γ)ω	ρό(γ)ά			ρυτός
έλεύ(θ)σομαι	εἰλήλουθα			ἥλυθον
πεύθομαι				πύστις
φεύγω				ἔφυγον
νέμω	νόμος			
εἰς from	δμοῦ			ἄμα, ἄ-παξ
*sems				
μένος	μέμονα			μέ-μα-μεν
πένθος	πέπονθα			ἔπαθον
ἐ-γένετο	γέγονα			γί-γνο-μαι, γέ-γα-μεν
μένω				μίμνω
ποι-μένα	δαί-μονα	ποι-μῆν	δαί-μων	ποί-μην
φρένα	εὔ-φρονα	φρήν	εὔ-φρων	φρασί
κλέπτω	κέκλοφα			ἐκλάπην
τρέπω	τροπή		τρωπάω	τραπεῖν
δέρκομαι	δέδορκα			ἔδρακον
φέρω	φορέω		φώρ	δέ-φρος
πα-τέρ-ες	εὐ-πά-τορ-ες	πα-τήρ	εὐ-πά-τωρ	πα-τρός

II. The ο-series.

sg. 1.	sg. 2.	lg. 1.	lg. 2.	wg. 1.	wg. 2.
ό	ο	ό	ό	ο	—
δψιμαι		δψ		δπτέον	
βό(γ)ες	βοῦς from				έκατόμ-βη
	*βωνς				

III. The *a*-series.

sg. 1.	sg. 2.	lg. 1.	lg. 2.	wg. 1.	wg. 2.
á	o	á	ó	a	
ἀγω	δέγμος	Lat. amb-āges	ἀγωγή	-ακτός	

IV. The *ē*-series.

sg. 1.	sg. 2.	wg. 1.	wg. 2.
é	ó	ə	—
τίθημι	θωμός	θετός for *θατός	
Skr. dá-dhā-mi		hitáḥ	da-dh-máḥ
ρήγνυμι	ἔρ-ρωγα	ράγηναι	
λήγω		λαγαρός	
ἥμα	ἀφ-έ-ω-κα	έτός for *άτός	

V. The *ō*-series.

sg. 1.	sg. 2.	wg. 1.	wg. 2.
ó	ó	ə	—
δίδωμι		δοτός for *δατός	Skr. da-d-máḥ
Lat. dōnum, δῶρον		Lat. datus, δάνος	

VI. The *ā*-series.

sg. 1.	sg. 2.	wg. 1.	wg. 2.
á	ó	ə	—
Dor. φᾶμί	φωνή	φαμέν	
Dor. ἵσταμι		ἵσταμεν, στατός	
Dor. ἔ-πτᾶξα	πτωχός	·πτακών	
Dor. τάκω		τακερός	

DISSYLLABIC BASES.

§ 97. In the parent Indg. language either the first or the second syllable of dissyllabic bases always contained the weak grade of ablaut. Both syllables could have the weak, but not the strong grade. From this it follows that forms

of the type *φέρε*, *φέρε-τε*, Dor. *φέρο-μες*, and *γί-γνο-μαι* cannot be original. The prim. Indg. forms corresponding to the former were *bhér, *bhṛ-t(h)é, *bhṛ-més = prim. Gr. *φέρ, *φρατέ, *φραμές, and to the latter *gí-gnə-mai = prim. Gr. *γί-γνα-μαι. *φέρε*, *φέρε-τε*, *φέρο-μες*, *γί-γνο-μαι* and similar forms contained the thematic vowels, e, o. See §§ 450, 456. And in like manner forms of the type *γένος* (stem *γένε-*, Skr. *jánas-*, Lat. *gener-*), *φόρος*, &c. were new formations which came into existence long after the factors which caused the phenomenon of ablaut had ceased to operate. Such new formations took place partly in the parent Indg. language itself and partly in the prehistoric period of the separate languages.

In the following examples of dissyllabic bases the grade of ablaut before the + refers to the first syllable of the base and the one after the + to the second syllable.

(a) Dissyllabic light bases:—sg. 1+wg. 2 Lith. lēk-mi, *I leave*, sg. 2+wg. 2 λέ-λοιπ-α, lg. 1+wg. 2 Skr. á-rāikṣ-am (§ 507), wg. 2+sg. 1 ē-λιπε-ς, wg. 2+sg. 2 ē-λιπο-ν: *lēiq(e)-, *liq-ē-. sg. 1+wg. 2 φέρ-τρον, φέρ-τε, Lat. fer-tis, lg. 2+wg. 2 φώρ (§ 92 (a)), wg. 2+sg. 2 δέ-φρο-ς: base *bhēre-. sg. 1+wg. 2 Lat. genu, sg. 2+wg. 2 γόννυ, wg. 2+sg. 1 Goth. kniu, lg. 2+wg. 2 γων-īā, wg. 2+wg. 2 Skr. abhi-jñú, *down to the knee*, γνύξ: base *geneu-. sg. 1+wg. 2 δέκα-τος, wg. 2+sg. 2-κοντα=Indg. *.dkomtē, wg. 2+wg. 2 fī-κατι=Indg. *.dkmti: base *dekomtē. sg. 1+wg. 2 αὐξώ, Lat. augēre, wg. 2+sg. 1 Lat. vegeo, wg. 2+lg. 2 OE. wōcor, *progeny*, *usury*, wg. 2+sg. 2 Goth. wahsjan, *to grow*, wg. 2+wg. 2 Skr. ugráh, *mighty*: base *aweq-, *increase*. wg. 2+sg. 1 ēap from *wesṛ, wg. 2+lg. 1 Lat. vēr from *wēsr-, lg. 1+wg. 2 ḡws from *āusōs, wg. 2+wg. 2 Skr. uśás, *dawn*: base *awes-, *shine, flash up*.

(b) Dissyllabic heavy bases. The long vowel (ē, ō, ā) in the second syllable of these bases was weakened to ē

when the accent was on the first syllable (§ 458). When the accent was on the second syllable the long vowel was preserved and the short vowel of the first syllable disappeared, as *téma-, *génə-, *péta- beside *tmé-, *gnō-, *ptá-. It is therefore impossible to determine to which of the long vowels the ē goes back unless forms have been preserved in which the second syllable of the base originally had the accent. The same difficulty also exists with the prim. Indg. combinations emə, enə, elə, erə, which became in prim. Greek μᾶ, νᾶ, λᾶ, ρᾶ when the last element of the combination had the secondary accent (§ 90). They thus fell together with the base forms of the type *ptā- with long ā. Examples are—sg. 1 + wg. 1 τέμαχος, wg. 2 + sg. 1 τέτμηκα : base *temē-, cut. sg. 1 + wg. 1 Skr. véman- from *vayiman-, *loom*, sg. 2 + wg. 2 (f)olīsos, wg. 2 + sg. 1 Lat. viēre, wg. 2 + wg. 1 ἴτεā, Lat. vītis, wg. 2 + wg. 2 ἴτυs : base *wejē-, *plait, wind.* sg. 1 + wg. 1 Skr. jáni-tōh, *to beget*, γένεσιs for *γένασιs, wg. 2 + sg. 1 γνωτόs, ē-γνων, Lat. (g)nōtus, OE. cnāwan (*gnē-), *to know*, wg. 2 + wg. 1 Skr. já-jñih, *germinating* : base *genō-, *genē-, gignere. sg. 1 + wg. 1 πέταμαι, sg. 2 + wg. 1 ποτάμαι, lg. 2 + wg. 1 πωτάμαι, wg. 2 + sg. 1 πτῆναι : base *petā-, *spread out, fly.* sg. 1 + wg. 1 Skr. bhávi-tum from *bhéwi-tum, *to be*, wg. 2 + sg. 1 Lat. -bam from *bhwām, wg. 2 + wg. 1 ē-φū from *é-bhwēt, wg. 2 + wg. 2 φύσιs : base *bhewā-, *be*. sg. 1 + wg. 1 κέρασαι, wg. 2 + sg. 1 κέκραμαι : base *kerā-, *mix.* sg. 1 + wg. 1 τελαμών, wg. 1 + wg. 1 ē-τάλασσα (Hesych.), wg. 2 + sg. 1 τλητόs, Dor. τλάτοs, Lat. lātus : base *telā-, *bear, endure.*

CHAPTER V

THE PRIMITIVE INDO-GERMANIC
CONSONANTS

§ 98. The Indo-Germanic parent language had the following system of consonants:—

	LABIAL.	DENTAL.	PALATAL.	VELAR.
Explosives	tenues p	t	k	q, q ^w
	mediae b	d	g	g, g ^w
	tenues aspiratae ph	th	kh	qh, q ^w h
	mediae aspiratae bh	dh	gh	gh, g ^w h
Spirants	voiceless s			
	voiced z		?j	
Nasals	m	n	ñ	ŋ
Liquids		l, r		
Semivowels	w (u)		j (i)	

NOTE.—I. Explosives are consonants which are formed with complete closure of the mouth passage, and may be pronounced with or without voice, i. e. with or without the vocal cords being set in action; in the former case they are said to be voiced (e. g. the mediae), and in the latter voiceless (e. g. the tenues). The aspirates are pronounced like the simple tenues and mediae followed by an h, like the Anglo-Irish pronunciation of t in tell.

The palatal explosives are formed by the front or middle of the tongue and the roof of the mouth (hard palate), like g, k (c) in English get, good, kid, could; whereas the velars are formed by the root of the tongue and the soft palate (velum). The latter do not occur in English, but are common in Hebrew, and are often heard in the Swiss pronunciation of German. In the parent Indo-Germanic language there were two kinds of velars, viz. pure velars and velars with lip rounding. The latter are here indicated by w. The palatal and velar nasals

only occurred before their corresponding explosives, *ñk*, *ñg*; *ŋq*, *ŋg*, &c.

2. Spirants are consonants formed by the mouth passage being narrowed at one spot in such a manner that the outgoing breath gives rise to a frictional sound at the narrowed part.

z only occurred before voiced explosives, e. g. **niddos* = Lat. *nidus*, English *nest*; **ozdos* = Gr. *όξος*, Goth. *asts*, *bough*.

3. The nasals and liquids had the functions both of vowels and consonants (§ 64).

4. The essential difference between the so-called semivowels and full vowels is that the latter always bear the accent of the syllable in which they occur, e. g. in English *ców*, *stáin* the first element of the diphthong is a vowel, the second a consonant; but in words like French *rwá* (written *roi*), *bjér* (written *bière*), the first element of the diphthong is a consonant, the second a vowel. In consequence of this twofold function, a diphthong may be defined as the combination of a sonantal with a consonantal vowel. And it is called a falling or rising diphthong according as the stress is upon the first or second element.

5. From the above system of consonants have been excluded certain rare sounds which only existed in the parent language in combination with other sounds, viz. *sh* and *zh*, *p̪* and *t̪*, *ph̪* and *dh̪*.

sh and *zh* only occurred in combination with tenues and mediae and arose from the older combinations, tenues aspiratae and mediae aspiratae + s, as *tsh*, *psh*, *dzh*, *bzh* from older *ths*, *phs*, *dhs*, *bhs*.

p̪ and *t̪* only occurred after palatals and velars which were originally unaspirated, as *kp̪*, *qp̪*, *gp̪*, *gd̪*.

ph̪ and *dh̪* only occurred after palatals and velars which were originally aspirated, as *kph̪*, *qph̪*, *gph̪*, *gdh̪* from older *khp̪*, *qhph̪*, *ghd̪*, *ghd̪*. In the present state of our knowledge it is impossible to determine how these four spirants were pronounced in the parent language. In Greek they became t-sounds, and in Sanskrit, Latin, Germanic and the Baltic-Slavonic languages they became s-sounds. See §§ 225-6.

6. The tenues aspiratae and the mediae aspiratae only occurred before vowels, semivowels, liquids and nasals. When they came to stand before explosives or spirants, they became deaspirated, as *p*th, *b*dh, *t*sh, *d*zh from older *p*ht, *b*ht, *t*hs, *d*hs, see § 109.

7. It is doubtful whether the parent language had a spirant *j*, see § 227.

§ 99. The following tables contain the normal equivalents of the Indg. explosives in Greek, Latin, Old Irish, prim. Germanic, Gothic, Sanskrit and the Baltic-Slavonic languages. For examples see the paragraphs dealing with labial, dental, palatal and velar explosives.

§ 100.

I. THE TENUES.

Indg.	Gr.	Lat.	O.Ir.	P. Germanic.	Goth.	Skr.	Lith.	O.Slav.
p	π	p	—	f, b, b	f, þ, b	p	p	p
t	τ	t	t, th	p, ð, d	p, ð, d	t	t	t
k	κ	c	c	x, ȝ	h, ȝ, g	ś	.sz	s
q	κ	c	c	x, ȝ	h, ȝ, g	k, c	k	k, č
q^w	π, τ, κ	qu, c	c	xw, gw	hv, ȝ, w	k, c	k	k, č

NOTE.—1. On the development of the Indg. pure and labialized velars in Greek, Sanskrit, Lithuanian and Old Slavonic see §§ 195–210.

2. In Lat. *p* and *c* disappeared medially before *s*+consonant and initially before *s*; *pn*, *tn*, *tsn*>*nn*; *tt*, *ts*>*ss*; *tsl*>*ll*; *tł*>*l* initially and *cl* medially; *cn*>*gn*; and *ncn*>*n* with lengthening of a preceding vowel; *qu*>*c* before *u* and consonants.

3. In O.Ir. *p* disappeared initially and medially between vowels; *sp*>*s*, *f* initially and *sc* medially; *pt*, *ps*, *rp*>*cht*, *ss*,

rr; tt, ts, st>ss; t and c disappeared before nasals and liquids; cs, ct, rct, nc>ss, cht, rt, gg.

4. The Indg. tenues p, t, k, q, q^w became in prim. Germanic the voiceless spirants f, þ, x, xw = Goth. f, þ, h, hv. These voiceless spirants as also Indg. s became by Verner's Law the voiced spirants þ, ð, z, gw, z (see § 103, note 2) medially and finally when the vowel next preceding them did not, according to the original Indg. system of accentuation, bear the principal accent of the word. The Indg. tenues remained unshifted in the combination s+tenuis, and t also remained unshifted in the Indg. combinations pt, kt, qt. In some words the Indg. velars, when preceded or followed by a w or another labial in the same word, appear in the Germanic languages as labials by assimilation, as Goth. fimf, five, wulfs, wolf = Indg. *perq^we, *wlq^wos.

§ 101.

2. THE MEDIAE.

Indg.	Gr.	Lat.	O.Ir.	P. Germanic.	Goth.	Skr.	Lith.	O.Slav.
b	β	b	b	p	p	b	b	b
d	δ	d	d	t	t	d	d	d
g	γ	g	g	k	k	j	ž	z
g	γ	g	g	k	k	g, j	g	g, ž
g ^w	β, δ, γ	v, gu, g	b, g	kw	q	g, j	g	g, ž

NOTE.—1. On the development of the Indg. pure and labialized velars in Gr. Lat. Skr. Lith. and O.Slav. see §§ 195–210.

2. In Lat. bn, dn, dm, dñ>mn, nn, mm, ll (but l initially), ld>ll; initial dj, dw, gn>j, b, n.

3. In O.Ir. d, g disappeared before l, n, r; bn>mn; mb, dm>mm; db, gb>bb; dg>gg; gd>dd.

4. The Indg. mediae b, d, g, q, q^w became in prim. Germanic the tenues p, t, k, kw.

§ 102. 3. THE TENUES ASPIRATAE.

The tenues aspiratae were rare sounds in the Indg. parent language. Sanskrit and Greek were the only languages which preserved them in historic times. In prim. Keltic, Germanic and the Baltic-Slavonic languages they fell together with the original tenues.

Indg.	Gr.	Lat.	O.Ir.	P. Germanic.	Goth.	Skr.	Lith.	O.Slav.
ph	φ	f, b	—	f, þ, b	f, þ, b	ph	p	p
th	θ	f, b, d	t, th	þ, ð, d	þ, ð, d	th	t	t
kh	X	h, f, g	c	x, ȝ	h, ȝ, g	?ch	sz	s
qh	X	h, (f), g	c	x ȝ	h, ȝ, g	kh, ch	k	k, č
qʷh	φ, θ, X	f, v, gu	c	xw, ȝw	hv, ȝ, w	kh, ch	k	k, č

Examples of the tenues aspiratae in Greek and Sanskrit are :—

ph: σφαραγέομαι, *I crack, crackle*, Skr. sphúrjati, *he cracks*; σφήν, Skr. sphyáḥ, *wedge*; σφέλας, Skr. phálakam, *footstool*.

th: οἶσθα, Skr. vēttha, *thou knowest*; πλάθανον, *a platter or mould to bake in*, Skr. pr̥tháḥ, *broad*; μόθος, *battle-din*, Skr. mánthati, *he shakes, twists*. Indg. sth became στ, as ἵστημι, Skr. tis̥thāmi, *I stand*; στῦλος, *pillar*, Skr. sthūrāḥ, *strong*; superlative suffix -ιστος = Skr. -iṣṭhāḥ.

kh: σχίζω, Lat. scindo, *I split*, Skr. chinátti from *skhinátti, *he splits*, OE. scādan, *to divide*; σχάω, *I slit*, Skr. chyáti, *he slits*.

qh: καχάξω, *I laugh*, Skr. kakhati, *he laughs*; κόγχος, Lat. congius, Skr. śanjháḥ, *muscle*.

$q^w\text{h}$: φάλλη, O.E. *hwæl*, *whale*; σφάλλομαι, *I stumble*, Skr. *skhalatē*, *he stumbles*.

§ 103. 4. THE MEDIAE ASPIRATAE.

Indg.	Gr.	Lat.	O.Ir.	P. Germanic.	Goth.	Skr.	Lith.	O.Slav.
bh	φ	f, b	b	þ, þ	þ, þ	bh	b	b
dh	θ	f, b, d	d	ð, ð	ð, ð	dh	d	d
gh	X	h, f, g	g	z, g	z, g	h	ž	z
gh	X	h, (f), g	g	z, g	z, g	gh, h	g	g, ž
g ^w h	φ, θ, X	f, v, gu	g	ȝw, ȝ, w	ȝ, w	gh, h	g	g, ž

NOTE.—1. In prim. Greek and Italic (Lat. Oscan, Umbrian, &c.) the mediae aspiratae became voiceless and thus fell together with the original tenues aspiratae.

2. The mediae aspiratae became in prim. Germanic the voiced spirants, þ, ð, ȝ, ȝw, and thus fell together with the voiced spirants which arose from the Indg. tenues by Verner's Law (§ 100, note 4). These sounds underwent the following changes during the prim. Germanic period:—þ, ð initially, and þ, ð, ȝ medially after their corresponding nasals, became the voiced explosives, b, d, g. þ, ð, ȝ remained in other positions, and their further development belongs to the history of the separate Germanic languages. In Goth. þ, ð (written b, d) remained medially after vowels, but became explosives (b, d) after consonants. They became f, þ finally after vowels and before final -s. ȝ remained medially between vowels, and medially after vowels before voiced consonants, but became x (written g) finally after vowels and before final -s. It became g initially, and also medially after consonants.

3. Prim. Germanic ȝw became ȝ before u, in other cases it became w.

§ 104. From what has been said in §§ 100-3 it will be seen that several of the Indg. explosives fell together in the various languages. In Keltic, Germanic and the Baltic-Slavonic languages the tenues aspiratae fell together with the original tenues. Sanskrit is the only language which preserved the original mediae aspiratae. In Greek and Latin they fell together with the original tenues aspiratae. In Keltic and the Baltic-Slavonic languages they fell together with the original mediae. In Greek, Latin, Keltic and the Germanic languages the pure velars fell together with the original palatals, but were kept apart in Sanskrit and the Baltic-Slavonic languages. In Sanskrit and the Baltic-Slavonic languages the labialized velars fell together with the pure velars, but were kept apart in Greek, Latin, Germanic and partly also in the Keltic languages.

INDG. SOUND-CHANGES.

§ 105. The consonants underwent various sound-changes during the prim. Indg. period, i. e. before the parent language became differentiated into the separate Indo-Germanic languages. The most important of these sound-changes are given in the following paragraphs.

§ 106. Mediae became tenues before voiceless consonants, as *ζευκτός*, Skr. *yuktāḥ*, Lat. *junctus*, Lith. *junktas*, Indg. **juqtós*, *yoked*, beside *ζυγόν*, Skr. *yugám*, Lat. *jugum*, Indg. **jugóm*, *yoke*; *ołσθα*, Skr. *vēttha*, *thou knowest*, beside *ołða*, *vēda*, *I know*; loc. pl. *ποσσί*, *ποστί*, Skr. *patsú*, beside nom. pl. *πόδες*, *pádah*; Lat. *nūptum*, *nūpsi* : *nūbere*; *rectum*, *rēxī* : *regere*; Goth. *giban*, *to give*, beside *fra-gifts*, *a giving*, *espousal*; OE. *bringan*, *to bring*, beside *brōhte*, *I brought*; and similarly in Gr. *αὔξω*, *αὔξάνω* : Lat. *augeo*, Lith. *áugu*, *I increase, grow*; *ἄνιπτος*, *unwashed*, Skr. *niktāḥ*, *washed*, *níψω* : *níçω* from **nigjō*; *λέξω*, *ἔλεκτο* : *λέγω*; *τρίψω*, *τέτριπται* : *τρίβω*.

§ 107. Voiceless consonants became voiced before voiced explosives and *z*, as *ἔβδομος* : *ἔπτά*; *ἐπί-βδαι* (nom. pl.), *the day after the feast*, where *-βδ-* is the weak form of **ped-*, *foot*, cp. Skr. *upa-bdá*, *stamping, trampling*; Skr. *nídāḥ*, Lat. *nīdus*, O.E. *nest*, from **ni-zdos*, *nest*, where *ni*=*down*, and *-zd-* is the weak form of **sed-*, *sit*; *βδέω* from **βεδεω* where *βεδ* is the weak form of **pezd-* which occurs in Lat. *pēdo*; and similarly *κύβδην*, *πλέγδην*, *κλέβδην* : *κύπτω*, *πλέκω*, *κλέπτω*; *γράβδην*, *βρέγδην* : *γέγραπται*, *βέθρεκται*; Hom. *ὑββάλλω* : *ὑπο-βάλλω*.

§ 108. When two aspiratae came together the first one became de-aspirated, as imperative *πέπισθι* from **bhebhidz-dhi*, older **bhebhidh-dhi* : *πέποιθα*. This combination of consonants was rare in the parent language.

§ 109. When an aspirata came to stand before *s* or before one or more unaspirated explosives, the aspiration became transferred to the last consonant. When the aspirata was voiced the whole group became voiced, as *αῖσχος* from **aighskos*, Goth. *áiwiski* from **aigwisk-*, *shame, disgrace*; *ἔσχατος* from **eghskatos* : *ἔξ*; *λέσχη* from **legzghā*, older **leghskā* : *λέχος*; *πάσχω* from **patskhō*, older **pŋthskō*, Indg. **qŋthskō* : *παθεῖν*; *ξένος* from **gzen-*, older **ghsen-*, Goth. *gasts*, *guest, stranger*, Lat. *hostis*; *ψώ* from **bzhō*, older **bhsō* : Skr. *bá-bhasti*, *he chews, devours*. Cp. § 225.

The sound-law whereby *bht*, *ght* became *bdh*, *gdh* = prim. Greek *πθ*, *κθ* was obliterated by new formations made after the analogy of forms which regularly had *τ*, as in *βλεπτός* : *βλέπω*; *τέτριπται*, *ἄτριπτος* : *τρίβω*; *πέπλεκται*, *πλεκτός* : *πλέκω*; *ἔλεκτο*, *λεκτός* : *λέγω*. And as combinations like *psh*, *bzh*, from older *phs*, *bhs*, regularly became *ps* in prim. Greek (§ 225), the above sound-laws may, so far as historic Greek is concerned, be formulated as follows: *φ*, *χ* appear as *π*, *κ* before a following *τ* or *σ*, as *γέγραπται*, *γράψω* : *γράφω*; *ἀλείψω* : *ἀλείφω*; *ροπτός* :

ροφέω; βέβρεκται, βρέξω : βρέχω; ἀνεκτός : ἀνέχομαι; στείξω : στείχω.

Every Indg. dental + s became ts (§ 110) in prim. Greek, for the further development of which see § 166.

§ 110. When two dental explosives came together a spirantal glide was developed between them, which is generally written $\ddot{s}z$, as t \ddot{s} t, t \ddot{s} th, d \ddot{s} d, d \ddot{s} dh. These combinations became in prim. Greek στ (= Skr. tt, Lat. Germanic ss), σθ, εδ, σθ. Every original dental + t appears in Greek as στ. Examples are:—ἀ-ιστός, *unseen, unknown*, Skr. vittāḥ, *known*, OE. ge-wiss, *sure, certain*, Lat. visus from *vissus; ἵστε : οἶδα; ὑστερος, Skr. úttarah, *latter*; pp. Skr. sattāḥ, *sitten*, OE. sess, *seat*, Lat. ob-sessor : *sed-, sit; ἀνυστός, ἀ-παστος : ἀνύτω, πατέομαι; κεστός from *κεντ-τός : κεντέω. κέκασται : κεκαδμένος; ἔψευσται : ψεύδω. οἶσθα, Skr. vēttha, thou knowest : οἶδα, vēda, I know. πέπεισται : πείθω. ἡρείσθην : ἐρείδω. ἐπείσθην : πείθω. μαξός, *breast*, Skr. mēdah, *fat*.

§ 111. Tenues often alternated with mediae especially before or after nasals, as σκαπάνη : Lat. scabo; Skr. daśát- : δεκάδ-; πάσσαλος from *πάκյαλος : πήγνυμι, Lat. pango, ποικίλος : Lat. pingo, δίκη, Lat. dīco : δέδειγμαι, εἴκοσι : Lat. vigintī.

The alternation between mediae aspiratae and mediae was also not uncommon, as ἀστεμφής : στέμβω, ἀφρός : ὅμβρος; πλίνθος : English flint, πυθμήν : πύνδαξ; Skr. ahám : ēyá, Lat. ego, Goth. ik; Skr. hánuh, jawbone: γένυς, Goth. kinnus, cheek; Skr. mahán : μέγας, Goth. mikilis; and similarly between tenues and tenues aspiratae, as πλατύς : Skr. prthuh, broad, πλάθανον, board; πάτος : Skr. pánthäh, path. The reasons for these alternations are unknown. For further examples see Brugmann, *Grundriss, &c.*, vol. i, second ed., pp. 629–35.

§ 112. s + consonant often alternated with the simple

consonant, as *στέγος* : *τέγος*, Lat. *tego*; *στένω*, *I groan* : Lat. *tonare*; *σκαίρω* : *κόρδᾶξ*; *σμίλη* : Goth. *máitan*, *to cut, hew*.

CHAPTER VI

THE GREEK DEVELOPMENT OF THE INDG. CONSONANT-SYSTEM

§ 113. Before entering upon the history of the individual consonants, it will be well to treat here several points concerning the Greek consonants in general.

§ 114. The Indg. mediae aspiratae became tenues aspiratae in prim. Greek as also in prim. Italic, and thus fell together with and underwent all further changes in common with the Indg. tenues aspiratae (§ 103, note 1). For examples see §§ 162, 177, 193, 201, 209.

§ 115. Aspirates became de-aspirated in prim. Greek as also in prim. Sanskrit when the next syllable or the next but one began with an aspirate :—

παχύς, *thick, large, stout*, Skr. *bahúḥ*, *abundant*; *πείθω*, Lat. *fido*, Indg. **bhéidhō*; *πεύθεται*, *he asks, inquires*, Skr. *bódhati*, *he learns, is awake*; *πυθμήν*, Skr. *budhnáḥ*, *bottom, depth*; *ἀμπέχω* from **άμφέχω*.

τάχιστος : *θάσσων, θάττων*; *τίθημι* from **dhidhēmi*, Skr. *dádhāmi*, *I put, place*; *τρέχω* : *θρέξομαι*; *τρέφω* : *θρέψω*; *τριχός* : *θρίξ*.

κέχυμαι, κέχυκα : *χέω*; *κέχρημαι* : *χράομαι*; *κεφαλή* from **χεφαλά*; *λικριφίς* : *λέχριος*.

And similarly with the spiritus asper, as *ἄμαθος* : Engl. *sand*; *αῦσος* from **aŭhos* older **hauhos*, Lith. *saūsus*, *dry, withered*; *ἔδεθλον* : *ἔδος*, Skr. *sádas-*, *seat*; *ἔχω* : *ἔξω*, *σχεῖν*. See § 213, 1.

NOTE.—Forms like *πεύσομαι*, *πείσω*, *ἔχύθην*, *ἔφάνθην*, &c. were new formations due to the influence of forms like *πεύθομαι*, *πείθω*, *χέω*, *φαίνω*.

§ 116. A tenuis, whether original or from an older media (§ 106), was written tenuis aspirata before a following θ. This was not a sound-change but merely a kind of graphic assimilation, as ἐκλέφθην, ἐπέμφθην, ἐρρίφθην, ἐτρέφθην, ἐπλέχθην : κλέπτω, πέμπω, ρίπτω, τρέπω, πλέκω ; ἐτρίφθην, ἐλέχθην, ἐμίχθην : τρίβω, λέγω, μίγνυμι.

ASSIMILATION OF CONSONANTS.

§ 117. π, β, φ + μ > μμ, as βλέμμα : βλέπω ; λέλειμμαι : λείπω ; δμμα from *δπμα : Lat. oculus, Lith. akis, eye ; τέτριμμαι : τρίβω ; γράμμα, γέγραμμαι : γράφω ; ψάμμος : ψαφαρός.

βν > μν, as ἀμνός from *ἀβνός : Lat. agnus ; ἐρεμνός : ἐρεβός ; σεμνός : σέβομαι.

δ, τ + π > ππ, as Hom. ὅππως from *ὅδ-πως ; κάππεσε from *κατ-πεσε.

δλ > λλ, as Lac. ἐλλά, Lat. sella, from *sedlā : OE. setl, seat ; πέλλυτρον from *πέδ-λῦτρον.

γν > γν, as γίγνομαι = γίγνομαι. See § 189.

λν > λλ, as ὄλλυμι from *ὄλνυμι ; Lesb. βόλλομαι from *βόλνομαι.

Before explosives ν became the corresponding homorganic nasal, as παλίμπαις, συμβάλλω, παλιγγενεσία.

νλ > λλ, as παλλόγος, σύλλογος.

νμ > μμ, as ἐμμένω, σύμμαχος.

νρ > ρρ, as συρράπτω, συρρέω.

Antevocalic μσ > μμ in Lesb. and Thess., which became simplified to μ in the other dialects with lengthening of the preceding vowel, as Lesb. ἔνεμμα, Att. Ion. ἔνειμα, Dor. ἔνημα : νέμω. See § 216.

Antevocalic νσ > νν in Lesb. and Thess., which became simplified to ν in the other dialects with lengthening of the preceding vowel, as Lesb. μῆννος, Thess. μειννός, Dor. Att. Ion. μηνός : Lat. mēnsis. See § 216.

Medial σλ > λλ, which remained in Lesb., after short

vowels, but became simplified to λ in the other dialects, as Lesb. Ἀλαος, Att. ἀλαος, from *σισλαφος. See § 215.

Medial $\sigma\mu > \mu\mu$ in Lesb. and Thess., which became simplified to μ in the other dialects with lengthening of the preceding vowel, as Lesb. Thess. ἐμμί, Dor. ἡμί, Att. Ion. εἰμί : Skr. ásmi, *I am*. See § 214.

Medial $\sigma\nu > \nu\nu$ in Lesb. and Thess., which became simplified to ν in the other dialects, as Lesb. φαενός, Ion. φαεινός, Att. φᾶνός, from *φαεσνός. See § 214.

On the prim. Gr. assimilation of the combination $\tau\sigma$, see § 166.

$\tau\sigma\nu > \nu\nu$, as βλέννος from *βλετσνος, see § 223.

THE SEMIVOWELS.

§ 118. w and j, generally called u- and i-consonant, are the consonants corresponding to the vowels u and i with which they often interchange in different forms of the same word, as Indg. *swépnos, Skr. svápnah, beside *supnós, Gr. ὑπνος; Ion. γοῦνα from *γονφα beside γόννυ; φεύγω beside ἔφυγον; Indg. *djéús, Skr. dyáúh, sky, Gr. Ζεύς beside loc. Skr. diví, Gr. Διψί; Indg. *jénti, Skr. yánti, *they go*, beside *imés, Skr. imáh, Dor. ἵμες, *we go*; λείπω beside ἔλιπον. In many philological works u- and i-consonant are written u and i in order to indicate their close relationship to the vowels u and i. In this grammar they are written u and i when they form the second element of a tautosyllabic diphthong, as φεύγω, λείπω, οἴκει, Ζεῦ, in all other positions they are written w or respectively f and j. It should be noted that u-consonant remained in the oldest period of the language not only as the second element of diphthongs but also in other positions; whereas i-consonant only remained as the second element of tautosyllabic diphthongs, in all other positions it either disappeared or became some other sound.

Beside i-consonant it is generally supposed that the Indg.

parent language had a spirant j initially which is represented in Greek by *ζ*, but which fell together with i-consonant in all the other Indg. languages, cp. *ȝyγόν*, Skr. *yugám*, Lat. *jugum*, Goth. *juk*, *yoke*, beside *ȝueis*, Skr. *yūyám*, Goth. *jus*, Lith. *jūs*, *ye*. It is probable however that this distinction is not original, but is due to a sound-change which took place in prim. Greek under conditions that have not yet been discovered. See § 227.

§ 119. In the Indg. parent language postconsonantal w, j alternated with uw, ij. The former regularly occurred after short and the latter after long syllables. This original distinction was best preserved in Sanskrit. In the other languages it became greatly obscured owing partly to special sound laws which took place in the separate languages, and partly to numerous analogical formations whereby forms with short syllables were remodelled on the analogy of those with long syllables and vice versa. Regular forms were: Ion. *oὐλος*, Att. *ὅλος*, from **ὅλfοs* = Skr. *sárvah*, *whole, all*; and similarly *δουρός*, *δορός*; *μοῦνος*, *μόνος*; beside gen. *ὅφρύοs* from **ὅφρύfοs* = Skr. *bhruváh*, cp. O.E. nom. pl. *brūwa*, *eyebrows*; *ἰχθύοs* from **ἰχθύfοs*; *δάκρυοs* from **δάκρυfοs* : *δάκρυ*; *βότρυοs* from **βότρυfοs* : *βότρυs*; *ἀγνύāσι* from **ἀγνύfασι*, cp. Skr. *aśnuvánti*, *they attain*. *ἄλλοs* from **ἄλjοs*, Lat. *alias*, Goth. *aljis*, *other*; *μέσσοs*, *μέσοs*, from Indg. **médhjos* = Skr. *mádhyah*, Lat. *medius*, Goth. *midjis*, *middle*; *πεζόs* from **πεδjós* = Skr. *pádjah*, *on foot*; *λέαινa* from **λέfavja*; beside *ἄγριοs* from **ἄγρijos* = Skr. *ajriyah*; *νή(F)ioс* = Skr. *nāvīyah*; *πάτριοs*, Skr. *pítriyah*, Lat. *patrius*, Indg. **pətrijos*, *paternal*; *ἄκριοs* from **ἄκrijos* : *ákris*; gen. *τριῶν* = Goth. *þrijē*.

w

§ 120. Indg. w, which probably had the same sound-value as NE. w in *win*, remained in the oldest period of all the Greek dialects. It was the sixth letter of the

alphabet and was called digamma by later grammarians. In Att. Ion. it disappeared so early that hardly any trace of it is left, but in the other dialects the sound remained until far into historic times, as is shown by inscriptions in the various dialects. It also began to disappear in these dialects about the end of the fifth century B. c. In all the dialects it began to disappear earlier medially than initially, and initially earlier before *o*, *ω*, *ou* than before other vowels. Upon metrical grounds it can be shown that *f* must have been a living sound at the flourishing period of the Greek epic. It was also still in existence initially among the Boeotians at the time they adopted the Ionic alphabet at the end of the fifth century B. c.

§ 121. Initial *w* disappeared in Att. Ion., but remained in the oldest period of the other dialects. It also remained in Latin and the old Germanic languages, but became the spirant *v* (= NE. *v*) in Sanskrit and the Baltic-Slavonic languages, and *f* in O. Irish, as *olða*, Hom. *foiða*, Skr. *vēda*, OE. *wāt*, *I know*, Lat. *vidēre*; *εἴκοσι*, Dor. *fēikati*, Boeot. *fīkati*, Skr. *vīśatī*, Lat. *vīginti*, O. Ir. *fiche*, *twenty*; *oīkos*, Cypr. *Foīkos*, Skr. *vēśāḥ*, *house*, Lat. *vīcus*, Goth. *weihs*, *village*; *ōχos* : Pamph. *Féχω*, Skr. *váhāmi*, Lat. *veho*, OE. *wege*, *I carry*; *ἔργον*, Cretan *Férgov*, Elean *Fárgov*, OE. *weorc*, *work*; and similarly *ἔαρ*, Lat. *vēr*; *ἔπος*, Lat. *vōx*; *ἔσθής*, Lat. *vestis*; *ἔτος*, Lat. *vetus*; *tōs*, Lat. *virus*; *īs*, *īs*, Lat. *vis*; *ītréā*, Lat. *vitis*; *olīvos*, Lat. *vīnum*. *λάσιος* from **flάστιος*; *λύκος*, Skr. *vīkah*, OE. *wulf*, Lith. *vīlkas*, Indg. **wlqos*, *wolf*. Att. *ρήτρα*, Elean *Frátrā*, *saying, maxim, command*; *ρίζα*, OE. *wyrt*, *root*; Att. *ρῆξις* = Lesb. *Fρῆξις*. Initial *f* before consonants was sometimes written *β* in Lesbian and Boeotian. But as Lesbian inscriptions of the fourth century B. c. have only *ρ̄* it follows that the *βρ̄* in earlier Lesbian was merely graphical.

NOTE.—In a few instances we have the *spiritus asper* where

we should regularly expect the lenis, as Att. ἔννῦμι from * Féσνῦμι beside ἔσθης; ἔσπερος, Lat. *vesper*; ἔστιά, Lat. *Vesta*; ἥλος, Lat. *vallus*; ἔστωρ beside ἵστωρ; ἐκών, *willing*, Skr. *váśah*, *will, pleasure*. A satisfactory explanation for the spiritus asper in these words has not yet been found. It is highly probable that it has nothing to do with the *F*, but is due to the unsettled state of the spiritus asper in Attic of the fourth century B. C. Cp. its misuse in words like ἄπτω, Lat. *apto*; ἔως, Hom. ἡώς, Dor. ἀώς; ἵππος, Lat. *equus*.

§ 122. Intervocalic *F* disappeared in Att. Ion., but is frequently met with in some of the other dialects, as Att. Ion. νέος, Skr. *návah*, Lat. *novus*, *new*; ἑν·νέα, Skr. *náva*, Lat. *novem*, *nine*; οἴς, Skr. *ávih*, Lat. *ovis*, Lith. *avìs*, *sheep*, Goth. *awistr*, *sheepfold*; πίων, *fat*, Skr. *pívan-*, *swelling*; ἡ·ιθεος *ἡ·FιθεFos, *bachelor*, Skr. *vidhávā*, O.Ir. *fedb*, OE. *widewe*, *widow*, cp. Lat. *vidua*; gen. Δι(Φ)ός, Lat. *Jovis*, cp. Skr. *diváh*, *of the sky*; gen. Att. βασιλέως, Hom. *βασιλῆος*, Cypr. *βασιλῆFos*; κλέος, dial. of Phocis κλέFos, Skr. *śrávah*, *renown*; φαευός from *φαFευνος; χαρίεις from *χαριFευτς (§ 69, 1); λέαινα from *λέFανja; ρέει, Skr. *srávati*, *it flows*; and similarly θέω, θρέομαι, νέω (aor. ἔνευσα), πλέω, πνέω, χέω; ρόος, ρόῦς, Cypr. *ρόFos*, Skr. *srávah*, Lith. *sravà*, *stream*; and similarly θοός, πλόος, χόος. It also disappeared between a diphthong and a following vowel, as λαιός, Lat. *Iaevis*; οἴος, Cypr. *οīFos*; on forms like δᾶήρ from *δαιFηρ, δετ, Cypr. and dial. of Phocis *aiféi*, see § 57.

§ 123. Medial *F* before *p* and *λ* regularly combined with a preceding vowel to form a diphthong, as Aeol. ἀπούρᾶς from *ἀποFρᾶς; εὐράγη, αὔρηκτος, Att. ἐρράγη, ἀρρηκτος; καλαύροψ: ρόπαλον older *Fρόπαλον; ταλαύρινος = ταλά·Fρῖνος, cp. Lesb. *Fρῖnos*, *skin, hide*. Forms like Att. ἐρράγη, ἀρρηκτος, ἐρρηξα, ἐρρωγα; ἐρρήθην, ἀρρητος beside ρήτος had their *ρρ* from the initial position before *ρρ* became simplified to *ρ*, see § 138.

§ 124. Indg. postconsonantal w. In this combination it is necessary to take into consideration the nature of the preceding consonant.

1. f disappeared after π, φ, θ, κ = Indg. p, bh, dh (gh), and pure velar q (§ 195), as νήπιος from *νη·πfios, *infans*. ὑπερφίαλος, φίτυ, from *ὑπερ·φfιαλος, *φfίτυ, root *bheu-, *be*. θάνατος from *θfνātόs, *θfάναtοs, cp. Skr. dhvāntāḥ, *covered, dark*; ὁρθός, Skr. īrdhvāḥ, *straight*; θαιρός, θολός, θέός, μέθη from *θfapjos, *θfοlόs, *θfεsos, *μέθfη; θήρ, Lesb. φήρ, Lith. žvér̄is, *wild animal*, Lat. ferus. καπνός, Lat. vapor, Lith. kvāpas, *smoke, vapour*.

2. kw became ππ which was simplified later to π initially, as īppos, Skr. āśvah, Lat. equus, *horse*, Goth. aīlva-tundi, *thornbush, lit. horse tooth*; Boeot. τὰ ππάματα beside Dor. πάμα, πάσασθαι, from *kwā-, cp. Skr. śvātrāḥ, *flourishing, prosperous*.

3. Initial tw- became σσ- which was simplified later to σ-, as σέ, Skr. tvā, tvām, *thee*; σόs, Skr. tváḥ, *thy*; σάkos beside φερε-σσακήs, cp. Skr. tvác-, *hide, skin, cover*; σείω beside Hom. ἐπι-σσείων, cp. Skr. tviṣ-, *to be excited*; σορόs, *coffin*, Lith. tveriù, *I hold, contain*. Medial -tw- became -ττ- in Att. and Boeot., and -σσ- in the other dialects, as Att. τέτταρεs, Boeot. πέτταρεs, Hom. τέσσαρεs, Skr. catvárah, Goth. fidwōr, *four*.

4. f disappeared after δ, as δίs, Skr. dvih, O.Lat. duis, later bis, *twice*; δώ-δεka, Skr. dvā-dāsa, *twelve*, cp. Goth. twái, *two*; in Homer sometimes with metrical lengthening of a preceding short vowel or with doubling of the δ, as Hom. voc. ἀδεέs, ούδόs, δείδιμεν, Att. ἀδεέs, ὀδόs, δέδιμεν; Hom. θεουδῆs from *θeodfήs, ἔδδεισεν, root *dwei-, *to fear*.

5. Initial sw- became the spiritus asper in Att. Ion., as ἑκυρόs, Skr. śváśurah, Goth. swaíhra, *father-in-law*; ἡδύs, Dor. ἀδύs, Skr. svādūḥ, Lat. suāvis from *swādwis, OE. swēte, *sweet*; ὄs, Skr. sváḥ, *his*; Hom. ὅππωs from *σfοd-πωs; and similarly ἔ, ὅf, Hom. ὅttι, from *σfε, *σfοl, *σfοd-τι.

Intervocalic -sw- disappeared with lengthening of the preceding vowel, as Dor. *νᾶός*, Ion. *νῆός*, Att. *νεός* (§ 72), from *νασφος; τελήεις from *τελεσφεντς (§ 69, 1); ἵος from *ἰσφος, arrow.

6. The combinations *vF*, *pF*, *λF* remained unchanged in some dialects until after the beginning of historic times. In Ionic and some of the Doric dialects the *F* disappeared with lengthening of a preceding vowel, and in Attic and the other dialects without such lengthening, as Ion. *τίνω*, Att. *τίνω* from *τινϝω, cp. Skr. *cinváti*, *cinōti*, *he arranges, piles up*; and similarly Ion. *κιχάνω*, *φθάνω*, *φθίνω*, beside Att. *κιγχάνω*, *φθάνω*, *φθίνω*; Ion. *εἴνατος*, *κεινός*, *μοῦνος*, *ξένος*, beside Att. *ἔνατος*, *κενός*, *μόνος*, *ξένος*. Ion. *οὐλός*, Att. *ὅλος*, Skr. *sárvah*, *all*; Ion. *κāλός*, Att. *καλός*, Dor. *καλϝός*. Ion. *κούρη*, Cret. *κώρᾶ*, Att. *κόρη*, Arcad. *κόρφᾶ*; Ion. *εἴρομαι*, *δουρός*, *φᾶρος*, *οὐρός*, Att. *ἔρομαι*, *δορός*, *φάρος*, *ὅρος*.

§ 125. Medial *F* disappeared before *j*, as *δῖος* from *διϝjος, Skr. *divyáḥ*, *divine, celestial*; *τεσσαράβοιος* from *-βοFjοs = Skr. *gávyāḥ*, *consisting of or relating to cattle*; *δαίω*, *κλαίω*, from *δαFjω, *κλαFjω. See § 129, 5.

§ 126. *F* disappeared between consonants, as Hom. *τέτρατος* from *τέτFpatos, Lith. *ketvižtas*, *fourth*; Ion. *τετρώκοντα* from *τετFρω-; fem. *πολλή* from *πολFjā, cp. Skr. fem. *pūrvī*, *many*, gen. *pūrvyāḥ*.

j

§ 127. Initial *j* became in Greek the spiritus asper through the intermediate stage of voiceless *j*. It remained in all the other Indg. languages with the exception of Old Irish where it disappeared, as *ñπap*, Skr. *yákṛt*, Lat. *jecur*, Lith. pl. *jeknos*, *liver*; *ðs*, Skr. *yáḥ*, *who*, Goth. *ja-bái*, *if*; *ñ-méñs*, Skr. *yūyám*, Goth. *jus*, Lith. *jūs*, *ye*; *άξομαι* from **jayyomai*, *I honour*, Skr. *yájati*, *he honours*.

§ 128. Intervocalic *j* disappeared in Greek, Latin and the Keltic languages, but remained in Sanskrit and the

Baltic-Slavonic languages and also in Gothic between vowels which remained as such in the historic period of the language, as *τρεῖς*, Cret. *τρέες*, Skr. *tráyah*, Lat. *trēs*, O.Ir. *tri*, Goth. neut. *þrija*, O.Slav. *trije*, Indg. **tréjes*, *three*; *δέω* from **δέjw*; *δέος* from **δέfējos*; gen. *κιός* from **κιjós* (§ 380); in adjectives denoting the material of which a thing is made, as *λίθεος* from **λίθējos*; and similarly *ἀργύρεος*, *αἴγεος*, *κύνεος*, *οἰκεῖος*, cp. Lat. *aureus*, *lapideus*; in iterative, causative and denominative verbs, as *ποτέομαι*, Skr. *patáyāmi*, *I hover*; *δχέω*, Skr. *vāháyāmi*, *I let drive*, Goth. *wagja*, *I move, shake*; and similarly *τρομέω*, *τροπέω*, *φορέω*, *φοβέω*, cp. verbs like Lat. *doceo*, *moneo*, *noceo*, *torreo*; *τιμάω*, *φιλέω*, from **τιμάjw*, **φιλέjw*; and similarly *ῳνέομαι*, *βασιλεύω*, *νομεύω* (see however § 489), *κονίω*, *μαστίω*, *ἀχλύω*, *γηρύω*, *μεθύω*, cp. verbs like Skr. *dēvayáti*, *he honours the gods*, from *dēváh*, *god*; Lat. *planto*, *albeo*, *fīnio*, *statuo*, from **plantājō*, **albejō*, **fīnijō*, **statujō*.

§ 129. Indg. postconsonantal j. In this combination it is necessary to take into consideration the nature of the preceding consonant.

1. *πj* became *πτ*, as *πτύω* from **πjvūjw*, Lith. *spiáuju*, *I spit out*; and similarly *θάπτω*, *κλέπτω*, *πτύσσω*, *χαλέπτω*.

2. *λj* became *λλ*, as *ἄλλος*, Lat. *alius*, Goth. *aljis*, *other*; *φύλλον*, Lat. *folium*; *κάλλος*, *beauty*, Skr. *kalyah*, *healthy*; *βάλλω* from **gljō* beside *ἔβαλον*; and similarly *ἄλλεσθαι*, *ἀγγέλλω*, *ἰάλλω*, *μέλλω*, *πάλλω*, *ποικίλλω*, *σκάλλω*, *στέλλω*, *τέλλω*.

NOTE.—1. In the Cyprian dial. the j merely palatalized the λ, and the λ thus palatalized was expressed by ιλ, as *αὶλων*, *Ἄπειλων* = *ἄλλων*, *Ἀπέλλων*, cp. the similar process in O.Ir. *aile* from **aljos*, **aljā*, *other*.

3. The combinations *α*, *ο* + *vj*, *ρj*, *fj* became *αιν*, *αιρ*, *αι*, *οιν*, *οιρ*, as *δραίνω* from **δρανjw*, Indg. **d̥r̥njō*; and similarly *κραίνω*, *μαίνομαι*, *μελαίνω*, *ὄνομαίνω*, *ποιμαίνω*,

ξαίνω; σπαίρω from *σπαρήω, Indg. *sprjō; and similarly ἔχθαιρω, σκαίρω; δαίω from *δαξjω; κοινός from *κονjός, older *κομjός, cp. Lat. *cum*; μοῖρα from *μορjā. For further examples see § 75.

4. *vj*, *pj*, preceded by *ε*, *ι*, *υ*, became *vv*, *pp*, which remained in Lesbian, but became simplified in Att. Ion. with lengthening of the vowel, as Att. Ion. κτείνω, φθείρω, Arcad. φθήρω, κλίνω, οἰκτίρω, ὀλοφύρομαι, beside Lesb. κτέννω, φθέρρω, κλίννω, οἰκτίρρω, ὀλοφύρρω; and similarly τείνω, ἔγείρω, κείρω, μείρομαι, πείρω, τείρω, κρήνω, πλήνω, κύρω, μῆρομαι. See § 69, 3.

5. *F* disappeared in the intervocalic combination *fj* and then the *j* combined with the preceding vowel to form a diphthong, except in the case of *i* which simply became lengthened, as δαίω, εὐρεῖα, τεσσαράβοιος, from *δαξjω, *εύρεfja, *-βοfjos, but δῖος from διfjos. See 3 and 4 above.

6. Indg. *t*, *th*, *dh+j* became *τσ* in prim. Greek. *τσ* then became *σ* initially and medially after long vowels, diphthongs, and consonants, but medially between vowels it became *ττ* in Boeotian and Cretan (Cret. also *ζ*), *σ* in Attic and Ionic, and *σσ*, *σ* in the other dialects, as σοβέω, *I scare away*, Skr. tyājayati, *he expels*; σῆμα, Dor. σᾶμα, from *θjāma, *sign, token*, Skr. dhyāman-, *thought*; αἴσα, πᾶσα, δόξα, from *αιτja, *παντja, *δοκtja; nom. acc. neut. pl. Att. ἄστα, Ion. ἄσσα, from *ά-τja; τετραξός from *τετραχθjos : τετραχθά; Ion. διξός, τριξός : διχθά, τριχθά; Lesb. Hom. μέσσος, Att. Ion. μέσος, Skr. mādhyah, Lat. *medius*, Goth. midjis, *middle*; Hom. νεμεσσάω, Att. νεμεσάω, from *νεμετjaω; and similarly πόσσος, πρόσσω, τόσσος, Att. Ion. πόσος, πρόσω, τόσος; Boeot. ὁπόττος, Cret. ὁπόττος, Att. ὁπόσσος.

NOTE.—2. The presents of verbs in *-jw*, the comparatives in *-jwv* and feminines in *-ja*, formed from dental stems, were in all the dialects remodelled on the analogy of those formed from *κ*-stems (see 7 below), as λίσσομαι : aor. λιτέσθαι; ἐρέττω,

ἐρέσσω : ἐρέτης ; κορύσσω : κόρυς, stem κόρυθ-, like πέττω, πέσσω ; μαλάττω, μαλάσσω μαλακός. Att. κρείττων, Ion. κρέσσων like ἥττων, ἥσσων : ἥκιστα. κίττα, κίσσα : κοῖται ; μέλιττα, μέλισσα : gen. μέλιτος ; θῆσσα : θής, gen. θητός, like ἄνασσα : ἄναξ ; φοίνισσα : φοῖνιξ.

7. Indg. **k**, **q**, **kh**, **qh**, **gh**, **gh+j** became **ττ** in Att. Boeot. Thessal. Cret. (Cret. also **θθ**), but **σσ** in the other dialects, as Att. **πίττα**, Ion. **πίσσα**, from **πικja*, Lat. *pix*, Lith. *pìkis*, *pitch*; Att. **πέττω**, Ion. **πέσσω**, *I cook, ripen*, Skr. *pácyatē*, *it ripens* ; Att. θάττων, Ion. θάσσων, cp. *ταχύς* ; and similarly Att. **τράττω**, **πλήττω**, **ἐλάττων**, **ταράττω**, **γλῶττα** = Ion. **πρήσσω**, **πλήσσω**, **ἐλάσσων**, **ταράσσω**, **γλῶσσα**.

ττ, **σσ** were simplified to **τ**, **σ** initially, as Hom. **σεῦς** beside **ἔσσενε**, cp. Skr. *cyávatē*, *he moves himself*; Att. **τήμερον**, Ion. **σήμερον**, from **kjāμερον* ; Att. **τεῦτλον**, Ion. **σεῦτλον**.

8. Indg. **dj** and **g**, **g+j** became in prim. Greek **dz** and then later **zd** by metathesis. Initial **dz** became **δ** in Boeot. Cret. and Laconian, but **ζ** (= **zd**) in the other dialects. Medially after consonants it became **δ** in all the dialects. Medially after vowels it became **δδ** in Boeot. and Cretan, but **ζ** (sometimes written **σδ**) in the other dialects, as Att. Ion. *Ζεύς*, Boeot. Cret. and Laconian *Δεύς*, Indg. **djēus*, cp. Skr. *dyāuh*, *sky* ; Boeot. Cret. **δώει** = Att. Ion. **ζώη**. **ἔρδω** from **έργjω*. **πεξός** from **πεδjός*, Skr. *pádyah*, *on foot* ; **σχίζω**, cp. Skr. *chidyátē*, *it is cut off* ; **ρέξω**, Boeot. **ρέδδω**, from **ρέγjω* ; **σφάξω**, Boeot. **σφάδδω**, from **σφάγjω* ; and similarly **έξομαι**, **ἐλπίζω**, **μιγάζομαι**, **ἄξομαι**, **ἀρπάξω**, **νίξω**.

9. Initial **σj** became the spiritus asper through the intermediate stage of voiceless **j**, as **ὑμήν**, *thin skin*, **ὕμνος**, *hymn*, **song**, Skr. *syūman-*, *string, cord*, *syūtāh*, *sewn*.

The medial combinations **ασj**, **οσj**, **εσj**, **υσj** became **αι**, **οι**, **ει**, **υι**, but **ισj** became **ι**, as **ναιώ** from **νασjω*, cp. *νάσσαι* ;

λιλαίομαι from **λιλασjομαι*; Hom. *τοῖο* from **τοσjο* = Skr. *tásya*; Hom. *τελείω*, *τελέω*, Att. *τελῶ*, from **τελεσjω*, *εἴην* from **έσjην*, Skr. *syám*, *I may be*; Hom. *ἰδνία* from **γιδνυσjα* = Skr. *vidúšī*, gen. *vidúṣyāḥ*; *κονίω* from **κονι-σjω*. For further examples see § 76.

§ 130. j disappeared after a consonant + nasal, as ἐλαύνω from **έλαfνjω*; θέρμω from **θερμjω*; φαείνω from **φα-Feσnjω*; and similarly μέριμνα, τόλμα.

THE LIQUIDS.

§ 131. The Indg. parent language had two liquids: l and r. Apart from cases of dissimilation, which are common in most languages, the two sounds were regularly kept apart in Armenian and the European languages, but in Iranian and partly also in the Indian group of dialects they fell together in r. According to Whitney, *Sanskrit Grammar*, § 53, 'r and l are very widely interchangeable in Sanskrit, both in roots and in suffixes, and even in prefixes: there are few roots containing l which do not show also forms with r; words written with the one letter are found in other texts, or in other parts of the same text, written with the other. In the later periods of the language they are more separated, and the l becomes decidedly more frequent, though always much rarer than the r.' From this it may be inferred that where l and r exist side by side in the same word, it is due to a mixture of dialects, as in *léhmi* beside *réhmi*, *I lick*.

1

§ 132. Indg. l generally remained in Greek as also in the other European languages, as ἀλλος, Lat. *alius*, O.Ir. *aile*, Goth. *aljis*, *other*; ἄλς, Lat. *sāl*, O.Ir. *salann*, OE. *sealt*, *salt*; ἀμέλγω, Lat. *mulgeo*, OE. *meolce*, *I milk*; κλέπτω, Lat. *clepo*, Goth. *hlifa*, *I steal*; κλυτός, Skr. *śrutáḥ*, Lat. *in-clutus*, *renowned*, cp. O.Ir. *cloth*, *renown*, OE. *hlēōpor*, *sound, melody*; λείπω, Lat. *linquo*, Lith.

lēkù, *I leave*, Skr. riñákti, *he leaves*, Goth. leihva, *I lend*; pf. λέλοιπα = Skr. riréca; λείχω, Skr. rēhmi, lēhmi, Lat. lingo, OE. liccie, *I lick*; λέχος, Lat. lectus, O.Ir. lige, *bed, couch*, OE. licgan, *to lie down*; νεφέλη, Lat. nebula, OHG. nebul, *cloud, mist*; Ion. οὐλος, Att. ὄλος, Skr. sárvaḥ, *whole, all*.

§ 133. In some of the Doric dialects λ became ν before τ and θ, as βέντιστος, φίνταται, ἐνθών, ἥνθες = βέλτιστος, φίλταται, ἐλθών, ἥλθες.

§ 134. In the Cretan dialect anteconsonantal λ became u-consonant and then combined with the preceding vowel to form a diphthong, as αύκά, αύγεῦν=ἀλκή, ἀλγεῖν; θεύγω, εύθεῦν, ἀδευφιαί = Hom. θέλγω, ἐλθεῖν, ἀδελφεῖ, *sisters*. Cp. Mod. northern dialects aud, oud, old; kaud, koud, cold.

§ 135. Occasionally λ became ρ and vice versa by dissimilation. This phenomenon is common in all the Indg. languages and especially in Greek and Latin, as ἀργαλέος from *ἀλγαλέος; κεφαλαργία beside κεφαλαλγία; Lat. Aleria beside Ἄλαλία; Lat. caeruleus : caelum. θηλητήρ beside θηρητήρ; μορμολύττομαι : μόρμορος; Lat. culter from *certros; pelegrinus from peregrinus; frāglo beside frāgro.

r

§ 136. Indg. r generally remained in Greek, as ἐρυθρός, Skr. rudhiráḥ, Lat. ruber, O.Ir. ruad, OE. rēad, Lith. raūdas, *red*; ἐρεβός, Skr. rájas-, Goth. riqis, *darkness*; ἐρπω, Skr. sárpāmi, Lat. serpo, *I creep*; φέρω, Skr. bhárāmi, Lat. fero, O.Ir. berim, Goth. baíra, O.Slav. berę, *I bear*; τρεῖς, Skr. tráyah, Lat. trēs, O.Ir. tri, Goth. þreis, O.Slav. trije, *three*; ἀρόω, Lat. aro, Goth. arja, Lith. ariù, *I plough*, O.Ir. arathar, *plough*; ἀγρός, Lat. ager, Goth. akrs, *field*, Skr. ájrah, *a plain*; πόρκος, Lat. porcus, OE. fearh, *pig*; πατέρ, Skr. pitár-, Lat. pater, O.Ir. athir, OE. fæder, *father*. See § 77.

§ 137. Indg. *sr* became voiceless *pp* which was later simplified to *ɸ* initially, as *ρέω*, Skr. *srávāmi*, Lith. *sraviù*, *I flow*, beside *κατα-ρρέω*; *ροφέω*, Lat. *sorbeo*, Lith. *srebiù*, *I gulp down*. See § 215.

§ 138. Indg. *wr* became *ɸ* initially (through the intermediate stage of *pp*) in the course of the individual dialects, as Att. *ρήτρα*, Elean *Fράτρα*, *saying, maxim*, Skr. *vratám, command, saying*. See § 121.

THE NASALS.

§ 139. The Indg. parent language had four kinds of nasals—labial *m*, dental *n*, palatal *ñ*, and velar *ŋ*, corresponding to the four classes of explosives *p*, *t*, *k*, *q*. Of these the palatal and velar nasals only occurred before their corresponding explosives and underwent in the different languages all changes in the place of articulation in common with these explosives, as Indg. **péŋqe = πέντε*, Lesb. *πέμπτε*, Skr. *páñica*, Goth. *fimf*, Lith. *penki*, *five*; Indg. **péŋtos = πέμπτος*, Lat. *quintus*, Goth. *fimfta*, Lith. *peñktas*, *fifth*; Indg. **aŋghō = ἀγχώ*, Lat. *ango*, cp. Goth. *aggwus*, OE. *enge*, *narrow*. The dental and labial nasals occurred also in other positions. All the nasals had in Greek a weak articulation before explosives and *σ* which accounts for their frequent omission on inscriptions and for nasals of all kinds being expressed by *ν* in archaic Greek orthography.

m

§ 140. Indg. *m* generally remained initially and medially in Greek, as Att. Ion. *μήτηρ*, Dor. *μάτηρ*, Skr. *mātár*, Lat. *māter*, O.Ir. *māthir*, OE. *mōdor*, O.Slav. *mati, mother*; *μέλι*, Lat. *mel*, O.Ir. *mil*, Goth. *miliþ, honey*; *μῦς*, Skr. *mūš*, Lat. OE. *mūs, mouse*; *γόμφος*, *bolt, nail*, Skr. *jámbhaḥ, tooth*, OE. *camb, comb*; *είμι*, Skr. *ásmi,*

Lat. *sum*, Lith. *esmì*, *I am*; ἔμεω, Skr. vámāmi, Lat. *vomo*, *I vomit*; ὥμι-, Skr. sāmí, Lat. sēmi-, OE. *sam-*, *half*; φέρομεν, Skr. bhárāmaḥ, Lat. *ferimus*, Goth. *baíram*, *we bear*.

§ 141. Final *m* became *n*, as ἔκατόν, Skr. śatám, Lat. *centum*, *hundred*; ἤγόν, Skr. yugám, Lat. *jugum*, *yoke*; ἔφερον = Skr. ábharam, cp. Lat. *eram*; gen. pl. λύκων = Skr. vṛkāṇām; acc. sing. of vocalic stems, as λύκον = Skr. vŕkam, Lat. *lupum*; τόν = Skr. tám, Lat. *is-tum*; Skr. ásvām = Lat. *equam*, cp. χώραν; τήν = Skr. tám, Lat. *is-tam*; βάσιν = Skr. gátim, cp. Lat. *partim*, *sitim*; ἡδύν = Skr. svādúm. ἥν, χθών, Skr. kṣam-, *earth*; χιών, Lat. *hiem-*, *winter*, from *ἔμ, *χθώμ, *χιώμ, with *v* levelled out into the oblique cases: ἐνός, χθονός, χιόνος, &c.

§ 142. *mj* became *nj*, as βαίνω from *βαν्यω, older *βαμ्यω, Indg. *g̃m̃jó, Lat. *venio*, cp. Goth. qiman, *to come*; κοινός from *κονյός, older *κομ्यός, cp. Lat. *cum*, *com-*, and *quoniam* from *quom-jam.

§ 143. *mt* became *nt*, as ἀντλον, cp. ἀμάω, *I gather in*; βροντή, cp. βρέμω, *I roar*; γέντο, *he grasped*, cp. M.Ir. *gemel*, *fetter*.

§ 144. *ms* became *ns* and then the nasal disappeared in all the dialects in the combination *ns* + consonant without lengthening of the preceding vowel (see § 153), as δεσπότης from *δεμς, gen. of *δεμ, *house*. When the *ns* was not followed by another consonant the nasal disappeared in most of the dialects with lengthening of the preceding vowel, as Att. Ion. εῖς, Dor. ḥs, but Cret. ēv̄s, from *ἔμς, cp. Lat. *semel*, *semper*.

§ 145. *ml*, *mr* became *mbl*, *mbr* which were simplified to *bl*, *br* initially, as βλώσκω, μέμβλωκα, ἔμολον; βλαδαρός, *flaccid*, Skr. mṛḍūḥ, *soft*; βλάξ, βληχρός, beside μαλακός; βλωθρός, *shooting up*, *high growing*, Skr. mūrdhā, *head*; βλίττω from *μλιττω, cp. μέλι. βροτός = Skr. mṛtāḥ, *mortal*, beside ἀμβροτος = Skr. amṛtaḥ; μεσημβρία, *mid-*

day, beside ἡμέρα. Cp. words like NE. *humble*, *number*, Fr. *humble*, *nombre*, beside Lat. acc. *humilem*, *numerum*.

§ 146. Prim. Greek *-μν-*, the weak grade of *-μεν-*, was simplified to *-ν-* after long vowels, as inf. *γνῶναι* from **γνωμναῖ* beside *γνώμεναι*; and similarly *ἀήναι*, *δαήναι*, *στῆναι*, &c., cp. § 546.

n

§ 147. n generally remained in Greek, as *νέος*, Skr. *návah*, Lat. *novus*, Goth. *niujis*, Lith. *naūjas*, *new*; *νέφος*, *cloud*, Skr. *nábhās-*, Lat. *nebula*, OHG. *nebul*, *fog, mist*; *νύξ*, Skr. *náktih*, Lat. *nox*, Goth. *nahts*, Lith. *naktis*, *night*; *ὄνομα*, Skr. *náma*, Lat. *nōmen*, OE. *nama*, *name*; *ἐνη*, *the day before the new moon*, Skr. *sánah*, Lat. *senex*, O.Ir. *sen*, Goth. *sineigs*, Lith. *sēnas*, *old*; *γένος*, Skr. *jánas-*, Lat. *genus*, Goth. *kuni*, *race, generation*; *γνωτός*, Skr. *jñātāh*, *known*; Dor. *φέροντι*, Skr. *bháranti*, Lat. *ferunt*, Goth. *baírand*, *they bear*; *ὕπνος*, Skr. *svápnaḥ*, *sleep*; voc. *κύον*, Skr. *śván*, *dog, hound*.

§ 148. Indg. In became II in prim. Greek, Latin, Keltic and Germanic. In Greek it is necessary to distinguish three categories all of which belong to the prehistoric period of the language.

1. The Indg. In which became II in prim. Greek. This II remained in Lesb. and Thessalian, but in the other dialects it became simplified to I with lengthening of the preceding vowel, as Lesb. *ἀπ-έλλω*, Dor. *βήλω*, Hom. *εἴλω*, from **félnw*; Lesb. *βόλλομαι*, Thess. *βέλλομαι*, Dor. *δήλομαι*, Att. *βούλομαι* from **βόλνομαι*: Lesb. *βόλλā*, Att. *βουλή*; Hom. *οὐλός* from **folnos*, *fleecy*; Lesb. Thess. *στάλλā*, Dor. *στάλā*, Att. Ion. *στήλη*, from **στάλνā*. See § 69, 6.

2. When λν came together at a later period it became λλ and remained as such in all the dialects, as *πάλλαξ*, *girl*, *Παλλás*, *Pallas*, epith. of Athena, to stem **παλεν-*, cp. OE. *fola*, *foal*, gen. *folan* for **fulen*; *ἔλλός*, to stem

*έλεν-, cp. O.Slav. *jelen-*, Lith. *élnis*, *young deer*; ὅλλυμι from *ὅλνῦμι, beside ὅλέσαι.

3. When νλ came together at a still later period, it remained, as πίλναμαι, πίλνημι, πιλνός.

§ 149. When νλ came together in composition it became assimilated to λλ, as ἀλλεγον, ἐλλάμπω, σύλλογος, παλίλογος.

§ 150. νμ became assimilated to μμ, as ἐμμένω, σύμμετρος, σύμμαχος; pf. ἥσχυμμαι : αἰσχύνω, κεκοίλαμμαι : κοιλαίνω, μεμώραμμαι : μωραίνω.

§ 151. Before explosives ν became the corresponding homorganic nasal, as συμβάλλω, συμπλέω, συμφεύγω, παλίμπαι, παλιγγενεσία, παλιγκαπηλεύω.

§ 152. nr became ndr which was simplified to dr initially, as ἀνδρός from *ἀνρός : ἀνήρ; σινδρός : σιναρός, *hurt, damaged*; Hesychius δρώψ· ἀνθρωπος. Cp. words like NE. *gander, thunder*, beside OE. *ganra, þunor*.

§ 153. n disappeared in prim. Greek before s or z + consonant without lengthening of the preceding vowel. This sound-change took place both when s, z were original or arose from some other source, as κεστός from *κενστός : κεντέω; τριāκοστός from *τριāκονστός; imperative mid. φερόσθων from *-ονσθων; ἐσ τοῦτο beside ἐνς, εἰς αὐτό; Ἀθῆναζε from *Ἀθᾶναν-δε. πλάξω from *πλάνεδω: ἐπλαγξα; σαλπίζω from *σαλπίνεδω : ἐσάλπιγξα; σύξυγος from *συν-εδυγος, see § 155. Here belong also the various dialect forms of the acc. pl. of ο- and ā-stems. In prim. Greek the regular endings were: -os, -as when the next word began with a consonant and -ovs, -av̄s in pause and when the next word began with a vowel, as τὸς λύκονς, but τὸντις ἐλεύθερονς. This original distinction was fairly well preserved in the dialect of Crete. The other dialects generalized the -ovs, -av̄s, the ν of which then disappeared with lengthening of the preceding vowel, whence Att. Ion. -ous, -as, Dor. -ωs, -ās, Lesb. -oīs, -aīs. See § 69, 1.

NOTE.—When *n* came to stand in the above combination at a later period it disappeared with lengthening of the preceding vowel in Att. Ion. and in most of the other dialects, as Att. ἔσπεισται from *ἔσπενσται with *v* re-introduced from the pres. σπένδω, the regular form would have been *ἔσπεσται; Ion. πεῖσμα from *πένσμα which was a new formation for *πένθμα.

§ 154. *v* remained in Arcad. Arg. Cret. and Thessalian before final -*s* and the medial -*σ-* which arose from the assimilation of consonants, but in the other dialects—except Lesbian—the *v* disappeared with lengthening of a preceding short vowel. In Lesb. the *vσ* became *ισ*, the *i* of which combined with a preceding short vowel to form a diphthong, as Att. Ion. εἴσ, Dor. ἥσ, Cret. ἔνσ, Lesb. εΐς, *one* (§ 144); Att. Ion. μέλας, τάλας, from *μέλανς, *τάλανς; γίγας, τιθείς, διδούς, from *γιγαντς, *τιθεντς, *διδοντς; πᾶσα from *παντja beside Lesb. παῖσα; διδοῦσα, τιθεῖσα from *διδοντja, *τιθεντja; Att. Ion. ἄγουσι, ἄγωσι = Dor. and prim. Gr. ἄγοντι, ἄγωντι, beside Lesb. ἄγοισι, ἄγψι.

ñ, η

§ 155. The oldest mode of representing these nasals in Greek was by *v* which is common on inscriptions. They came to be represented by *γ* after the combinations gn, gm had become assimilated to ην, ημ (§ 189), as in Att. γίγνομαι, ἀγμός = γίγνομαι, ἀγμός. It has already been pointed out that these nasals only occurred in the parent language before their corresponding explosives and underwent in the different languages all changes in the place of articulation in common with these explosives (§ 139). ñ : ηνεγκα, *I bore*, Skr. ānāśa, *he obtained*, cp. Lat. nanciscor; ἄγχω, Lat. ango, cp. Goth. aggwus, *narrow*. η : ἀγκάν, O.Lat. ancus, cp. Skr. aṅkāḥ, *hook*, OE. angel, *fish-hook*; πέντε, Lesb. πέμπτε, Skr. pāñcīa, Lat. quīnque, O.Welsh pímp, Goth. fimpf, Lith. penki, *five*; λιμπάνω, Lat. linquo, cp. Skr. riñcánti, *they leave*.

§ 156. The nasal disappeared with lengthening of the preceding vowel before Ion. *σσ*, Att. *ττ* from prim. Greek *χj* = Indg. *ghj* (§ 129, 7), as Ion. *ἄσσον* from *ἀγχ^jον, cp. ἀγχι; Ion. *ἐλάσσων*, Att. *ἐλάττων*, from *ἐλαγχ^jων; Ion. *θάσσων*, Att. *θάττων*, from *θαγχ^jων.

It also disappeared, but without lengthening of the preceding vowel, before *ζ* from prim. Gr. *yj*, as *κλάζω* from *κλαγγ^jω : Lat. *clango*; *πλάζω* from *πλαγγ^jω : Lat. *plango*; *σαλπίζω* : gen. *σάλπιγγος*.

THE LABIALS.

p

§ 157. Indg. *p* (= Skr. Lat. Lith. O.Slav. *p*, Germanic *f*, *b*). In O.Ir. it disappeared initially and medially between vowels) remained in Greek initially and generally also medially, as *πατήρ*, Skr. *pitár-*, Lat. *pater*, O.Ir. *athir*, OE. *fæder*, *father*; *πούς*, Skr. *pát* (gen. *padáḥ*), Lat. *pēs*, OE. *fōt*, *foot*; *πρό*, Skr. *prá*, Lat. *pro-*, O.Slav. *pro-*, *before*; *πολύς*, Skr. *purúḥ*, O.Ir. *il*, Goth. *filu*, *much, many*; *πλέκω*, Lat. *plecto*; *ἔπτα*, Skr. *saptá*, Lat. *septem*, Goth. *sibun*, *seven*; *ἔρπω*, Skr. *sárpāmi*, Lat. *serpo*, *I creep*; *ὑπέρ*, Lat. *s-uper*, OE. *ofer*, *over*, Skr. *upári*, *above*; *ὕπνος*, Skr. *svápnah*, Lat. *somnus* from *swepnos, O.Ir. *sūan*, *sleep*, OE. *swefan*, *to sleep*; *κάπρος*, Lat. *caper*.

§ 158. *πμ* became *μμ*, as *βλέμμα* : *βλέπω* (see § 117). *π* became *β* before *δ*, as *κλέβδην*, *by stealth* : *κλέπτω*; *ἔβδομος* : *ἔπτα*; *ἔπι-βδαι* (nom. pl.), *the day after the feast*, where -*βδ-* is the weak form of **ped-*, *foot*, cp. Skr. *upa-bdá-*, *stamping, trampling*. See § 107.

b

§ 159. Indg. *b* (= Skr. Lat. O.Ir. Lith. O.Slav. *b*, Germanic *p*) remained in Greek initially and generally also medially, as *βύκτης*, *blustering*, Skr. *buk-kārah*, *the roaring*

of a lion, Lat. *būcina*, *trumpet*, O.Slav. *bučati*, to roar, bellow; βάρβαρος, foreign, Skr. *barbarah*, stammering; βαλλίξω, I *dance*, Skr. *bal-balīti*, he whirls; λείβω, Lat. *libo*; ὄμβρος, Lat. *imber*, cp. Skr. *ámbu*, water. It should be noted that *b* was a rare sound in the parent Indg. language.

§ 160. On the change of β to π before voiceless sounds, as in $\tau\acute{\rho}\iota\psi\omega$, $\tau\acute{\epsilon}\tau\rho\pi\tau\alpha\iota$: $\tau\acute{\rho}\iota\beta\omega$, see § 106. $\beta\mu$ became $\mu\mu$, as $\tau\acute{\epsilon}\tau\rho\mu\mu\alpha\iota$: $\tau\acute{\rho}\iota\beta\omega$, see § 117.

ph

§ 161. ph was one of the rarest sounds in the parent language. It was preserved in Sanskrit and Greek, but in prim. Latin it fell together with original bh, and in prim. Keltic, Germanic and the Baltic-Slavonic languages with original p. σφαραγέομαι, I crack, crackle, Skr. sphūrjati, he cracks; σφήν, Skr. sphýáh, wedge; σφέλας, Skr. phálakam, footstool, see § 102.

bh

§ 162. Indg. bh (= Skr. bh, Lat. f initially and b medially, Germanic b, þ, Keltic and Baltic-Slavonic b) became voiceless ϕ in Greek, as φέρω, Skr. bhárāmi, Lat. fero, O.Ir. berim, OE. bere, O.Slav. bera, I bear; φράτηρ, member of a φράτρα, Skr. bhrátar-, Lat. fráter, O.Ir. bráthir, OE. bróþor, brother; ὄφρυς, Skr. bhrúh, OE. brū, Lith. bruvis, eyebrow; νέφος, cloud, Skr. nábhás-, Lat. nebula, OHG. nebul, mist; ὄμφαλός, Lat. umbilicus; γόμφος, nail, Skr. jámbhah, tooth, OE. camb, comb.

§ 163. $\phi\mu$ became $\mu\mu$, as γέγυραμμαι : γράφω, see § 117.

On the change of ϕ to π before voiceless sounds, as in γράψω, γέγυραπται : γράφω, see § 109. On the de-aspiration of ϕ , as in πέφενγα : φεύγω, see § 115.

THE DENTALS.

t

§ 164. Indg. t (= Skr. Lat. Lith. O.Slav. t, O.Ir. t, th, Germanic þ, ð, but t in the Indg. combinations pt, kt, qt, st) generally remained in Greek initially and medially, as *τείνω*, Lat. *tendo*, OE. þenne, *I stretch*, Skr. *tanóti*, *he stretches*; Lat. *tenuis*, O.Ir. *tana*, Lith. *tenvas*, OE. þynne, *thin*; *τατός*, Skr. *tatáḥ*, Lat. *tentus*, *stretched*; *τό*, Skr. *tád*, Lat. *is-tud*, OE. þæt, *the, that*; *τρέις*, Skr. *tráyah*, Lat. *trēs*, O.Ir. *tri*, OE. þri, O.Slav. *trije*, *three*; *τρέμω*, Lat. *tremo*; *πατήρ*, Skr. *pitár-*, Lat. *pater*, O.Ir. *athir*, OE. *fæder*, *father*; *φέρετε*, Skr. *bháratha*, Lat. (imper.) *ferte*, Goth. *baíriþ*, O.Slav. *berete*, *ye bear*; *ἔτος*, Lat. *vetus*; *κλυτός*, Skr. *śrutáḥ*, Lat. *in-clutus*, *renowned*, O.Ir. *cloth, renown*; *ἔστι*, Skr. *ásti*, Lat. *est*, Goth. *ist*, Lith. *esti*, *he is*; *κλέπτης*, Goth. *hliftus*, *thief*; *όκτω*, Skr. *aṣṭā́*, Lat. *octō*, O.Ir. *ocht*, OE. *eahta*, *eight*.

§ 165. *τπ* became *ππ*, as Hom. *κάππεσον* from *κατέπεσον*: *καταπίπτω*.

§ 166. Prim. Greek *τσ* (§ 109) became a double spirant the precise pronunciation of which is uncertain. Most scholars assume that it was þþ (= th in Engl. *thin*) or a kind of lisped ss. Before and after consonants, and finally it became σ through the intermediate stage σσ in all the dialects, as Hom. *ἴσος*, Att. *ἴσος*, Cret. *φίσφος* from **φιτσφος*, older **widswos*; Att. *βάλλουσι*, Cret. *βάλλουσι*, from **βάλλονται*: *βάλλων*; *νόσος* from **νότσφος*; *πάσχω* from **πάτσχω*: *παθεῖν*; Att. *ἔσπεισα*, Cret. *ἔσπενσα*, from **ἔσπεντσα*: *σπένδω*; *ἔπερσα* from **ἔπερτσα*: *πέρθω*; nom. *νύξ*, *νεότης*, *πούς*, *κόρυς*, *γύγας*, *διδούς*, *τιθεῖς*, beside stem *νύκτ-*, *νέότητ-*, *ποδ-*, *κόρυθ-*, *γύγαντ-*, *διδόντ-*, *τιθέντ-*.

Medially after long vowels and diphthongs it became σ in all the dialects, as dat. pl. *φωσί* from **φωτσί*; *σπεύσω* from **σπεύτσω*: *σπεύδω*; *ἔπεισα* from **ἔπειτσα*: *πείθω*.

Medially between short vowels it became $\tau\tau$ in Boeot. Cret. (Cret. also ζ), σ in Att. Ion., and $\sigma\sigma$, σ in the other dialects, as aor. Hom. δάσσασθαι, Att. δάσασθαι, Cret. δάτταθθαι, δάξαθαι : δατέομαι; loc. pl. Hom. ποσσί, Att. ποσί, Skr. patsú, beside nom. πόδες, Skr. pádah.

§ 167. Indg. tj became ts in prim. Greek and then had the same further development as the ts in § 166, as Hom. Att. Boeot. πᾶσα, Lesb. παῖσα, Thess. Cret. πάνσα, from *παντja; δόξa from *δόκτja; αῖσa from *αῖτja; Hom. τόσσos, τόσos, Lesb. τόσσos, Att. τόσos, from *τότjós. See § 129, 6.

§ 168. Initial tw- became σσ- which was simplified later to σ-, as σé, Skr. tvā, tvám, thee. Medial -tw- became -ττ- in Att. and Boeot., and -σσ- in the other dialects, as Att. τέττapes, Boeot. πέττapes, Hom. τέσσapes, Skr. catvárah, four. For further examples see § 124, 3.

§ 169. τι remained initially and also in the combination στι, as τίσis, ἔστi, πίσtis, στιφróς. Medially it partly became σi and partly remained. The reason for this two-fold treatment has never been satisfactorily explained. P. Kretschmer—*Kuhn's Zeitschrift*, vol. xxx, pp. 565–91—after investigating the subject in great detail, arrives at the following result: τi remained medially when the i was accented, and also finally when the accent was on the penultima, but it became σi when the i was unaccented. On the other hand Brugmann—*Grundriss*, vol. i, p. 662—assumes that the i became consonantal before vowels, as in πλούσios from *πλούtjos; gen. Ion. βάσios from *βάtjos and then the σ was levelled out into the nom. and acc. sing. βάσis, βásiv. A careful examination of the material collected by Kretschmer shows that both explanations leave a large residuum of unexplained forms, even when due allowance is made for a considerable number of analogical formations. The ti-stems and likewise the adjectives in *-tios have σi, as βásis, πόsis, δόsis, φύsis; πλούsios,

ἐνιαύσιος, ἀμβρόσιος. The pres. third pers. sing. of *μι-*-verbs and the third pers. pl. of *ω*-verbs have *-σι* in Att. Ion., but *-τι* in Dor. and Boeotian, as Att. δίδωσι, τίθησι φέρουσι beside Dor. δίδωτι, τίθητι, φέρουντι.

§ 170. *τ* became *σ* before a following *τ*, as ἀπαστος : πατέομαι; κεστός from *κεντ-τός : κεντέω; ὕστερος, Skr. úttarah, *latter*. See § 110.

d

§ 171. Indg. d (= Skr. Lat. O.Ir. Lith. O.Slav. d, Germanic t) generally remained initially and medially in Greek, as δέκα, Skr. dáśa, Lat. decem, O.Ir. deich, Goth. taíhun, OE. tien, Lith. dēzimt., ten; δίδωμι, Skr. dádāmi, Lat. dō, I give, O.Slav. dati, to give; δόμος, Skr. dámah, Lat. domus, O.Slav. domǔ, house; δύω, Skr. dvāú, dvā, Lat. duo, O.Ir. dāu, dō, Lith. dū, OE. twā, two; ἔδω, Skr. ádmi, Lat. edo, OE. ete, I eat; ἔδος, Skr. sádas-, seat, Lat. sedēre, OE. sittan, to sit; καρδία, κραδίη, Lat. gen. cordis, O.Ir. cride, Lith. szirdis, OE. heorte, heart; οἶδε, Skr. vēda, OE. wāt, he knows, Lat. vidēre, to see; acc. πόδα, Skr. pádam, Lat. pedem, OE. fōt, foot.

§ 172. δλ became λλ, as πέλλυτρον from *πέδ-λῦτρον, bandage worn by runners on the ankle; Lac. ἐλλά = Lat. sella, from *sedlā, OE. setl, seat.

δπ became ππ, as Hom. ὅππως from *ὅδ-πως older *σφόδ-πως, quomodo.

§ 173. Indg. dj became ζ, as Ζεύς, cp. Skr. dyāúḥ, sky; πεζός, Skr. padyáḥ, on foot. See § 129, 8.

§ 174. δ became σ before a following voiceless dental, as οἰσθα : οἶδα; ἔψευσται : ψεύδομαι. See § 110.

th

§ 175. th was a rare sound in the parent language. It was preserved in Sanskrit and Greek, but in prim. Latin it fell together with original dh, and in prim. Keltic,

Germanic and the Baltic-Slavonic languages with original t. *oīσθα*, Skr. *vēttha*, *thou knowest*; πλάθων, *a platter or mould to bake in*, Skr. *pr̥thūḥ*, *broad*; μόθος, *battle-din*, Skr. *mánthati*, *he twists, shakes*, see § 102.

§ 176. Indg. sth became στ, as ἵστημι, Skr. *tíṣṭhāmi*, *I stand*; στῦλος, *pillar*, Skr. *stūrāḥ*, *strong*; superlative suffix *-ιστος* = Skr. *-iśṭhāḥ*, see § 102.

dh

§ 177. Indg. dh (= Skr. dh, Lat. f initially, b medially before and after r, before l and after u (w), in other cases d, Keltic and Baltic-Slavonic languages d, Germanic d, ð) became voiceless θ in Greek, as θήγασθαι, *to suck*, Skr. *dháyanti*, O.Ir. *denait*, *they suck*, Lat. *fēlārē*, Goth. *daddjan*, *to suckle*; θῦμός, *courage, passion*, Skr. *dhūmāḥ*, Lat. *fūmus*, Lith. pl. *dúmai*, *smoke*; θύρα, OE. *duru*, pl. Lat. *fores*, Lith. *dūrys*, *door*; τίθημι, Skr. *dádhāmi*, *I put, place*, OE. *dæd*, *deed*, Lith. *déti*, O.Slav. *děti*, *to lay*, cp. Lat. *facio*, *fēcī*; μέθυ, *wine*, Skr. *mádhu*, O.Ir. *mid*, OE. *medu*, *meodu*, Lith. *medūs*, *mead, honey*; ἐρυθρός, Skr. *rudhirāḥ*, Lat. *ruber*, OE. *rēad*, *red*; αἴθω, *I burn*, Skr. *édhās-*, *fire-wood*, Lat. *aedēs*, *sanctuary*, originally, *fire-place, hearth*, OE. *ād*, *funeral pile*; οὐθαρ, Skr. *údhar*, Lat. *über*, OE. *ūder*, *udder*; πείθω, Lat. *fido*; imperative κλῦθι = Skr. *śrudhí*, *hear thou*.

§ 178. Indg. dhj became σσ, σ, as μέσσος, μέσος, Skr. *mádhyah*, *middle*, see § 129, 6.

§ 179. Indg. dh appears as σ before voiceless dentals, as πέπεισται, ἐπείσθην : πείθω, see § 110.

§ 180. On the de-aspiration of θ, as in τίθημι, see § 115.

THE PALATALS AND THE VELAR GUTTURALS.

§ 181. In treating the history of these consonants in the various languages it is convenient to divide the Indg. family of languages into two great groups according to the

different development which these sounds underwent in the two groups. The palatal explosives **k**, **kh**, **g** and **gh** usually appear in Greek, Italic (Latin, Oscan, Umbrian), Keltic and the Germanic languages as explosives or as sounds which are directly developed from explosives, whereas in the Aryan, Armenian, Albanian and Baltic-Slavonic languages they usually appear as spirants. The former group is generally called the centum- and the latter the satəm-group of languages, where Latin **centum** and Zend **satəm** represent the original Indg. word ***kmtóm**, *hundred*. This twofold development of the palatals is probably due to dialectal differences which already existed in the Indg. parent language. In addition to the palatals the parent language also had two kinds of velars, viz. pure velars and labialized velars or velars with lip-rounding. The pure velars fell together with the palatals in the centum-languages, but were kept apart in the satəm-languages. On the other hand the pure velars fell together with the labialized velars in the satəm-languages, but were kept apart in the centum-languages.

The following table contains the normal development of the palatals and velar gutturals in the various languages. The labialized velars are here indicated by **w**. In other parts of this grammar the **w** is almost always omitted as being unnecessary, because the Greek words themselves generally indicate whether they originally contained a pure velar or a labialized velar.

Centum-Languages.						Satem-Languages.		
Indg.	Gr.	Lat.	O.Ir.	Germanic.	Skr.	Lith.	O.Slav.	
k	κ	c	c	h; g, z		š	sz	
g	γ	g	g	k		j	ż	
gh	χ	h, f, g	g	g, z		h	ż	
q	κ	c	c	h; g, z		k, c	k, č	
g	γ	g	g	k		g, j	g, ž	
gh	χ	h, (f), g	g	g, z		gh, h	g	
q ^w	π, τ, κ	qu, c	c	hw, h; gw, z, w; f, b		k, c	k, č	
g ^w	β, δ, γ	v, gw, g	b, g	kw, k		g, j	g, ž	
g ^w h	φ, θ, χ	f, v, gu	g	g, zw, z, w		gh, h	g, ž	

I. THE PALATALS.

k

§ 182. Indg. *k* (= Lat. O.Ir. *c*, Germanic *h*; *g, z*, Skr. *ś*, Lith. *sz*, O.Slav. *s*) remained in Greek initially and generally also medially, as *έκατόν*, Lat. *centum*, O.Ir. *cēt*, OE. *hund*, Skr. *śatám*, Lith. *szimtas*, *hundred*; *καρδίā*, *κραδίη*, Lat. *cor*, O.Ir. *cride*, OE. *heorte*, Lith. *szirdis*, *heart*; *κλέπτω*, Lat. *clepo*, Goth. *hlifa*, *I steal*; *κλυτός*, Lat. *in-clutus*, Skr. *śrutah*, *renowned*, O.Ir. *cloth*, *renown*; *κύων*, Lat. *canis*, O.Ir. *cū*, OE. *hund*, Skr. *śvā*, gen. *śunah*, Lith. *szū*, gen. *szuñis*, *dog, hound*; *δέκα*, Lat. *decem*, Goth. *taíhun*, Skr. *dáśa*, Lith. *dëszimt-*, *ten*; *δέδορκε*, Skr. *dadárśa*, *he has seen*; *οἶκος*, *Foikos*, Skr. *vēśāḥ*, *house*, Lat. *vicus*, *village*; *όκτω*, Lat. *octō*, OE. *eahta*, Skr. *aṣṭāú*, *aṣṭā*, Lith. *asztūnì*, *eight*; *ώκυς*, Skr. *āśuh*, *quick*, Lat. *ōcior*.

§ 183. *kw* became *ππ*, as *ἵππος*, Lat. *equus*, OE. *eoh*, Skr. *āśvah*, *horse*. See § 124, 2.

§ 184. Medial *kj* became *ττ* in Att. and *σσ* in Ion., as *ἥττων, ἥσσων* : *ἥκιστος*; *πάτταλος, πάσσαλος* : root **pāk-*. *ττ* and *σσ* were simplified to *τ*, and *σ* initially, as Att. *τήμερον*, Ion. *σήμερον* from **kjāmēron*. See § 129, 7.

§ 185. *ks* became *χ* before a liquid or nasal, as *μυχλός* from **μυκσλος*, *stallion-ass* : Lat. *mūlus*; *λέχριος* : *λοξός*, Lat. *luxus*; *ἀράχνη* from **ἀρακσνā*, Lat. *arānea*; *λάχνη* from *λάκσνā*; *λύχνος* from **λυκσνος* : Lat. *lūna* from **louksnā*; *πάχνη* from **πακσνā*; *πλοχμός* : *πλόκαμος*. See § 218.

§ 186. *k* disappeared before *sk*, as *δίσκος* from **δικσκος* : *δικεῖν*; *έίσκω* from **fefiksko* : *έοικα*; *λάσκω* from **λακσκω* : *λακεῖν*; *διδάσκω* from **διδακσκω*.

§ 187. *k* became *γ* before voiced sounds, as *πλέγδην* : *πλέκω*. See § 107.

g

§ 188. Indg. *g* (= Lat. O.Ir. *g*, Germanic *k*, Skr. *j*, Lith. *ž*, O.Slav. *z*) remained in Greek initially and generally also medially, as *γένος*, Lat. *genus*, Goth. *kuni*, Skr. *jánas-*, *race, generation*, O.Ir. *gein*, *birth*; *γεύομαι*, Lat. *gusto*, *I taste*, OE. *cēosan*, *to choose*, Skr. *jušatē*, *he tastes*; *γόνυ*, Lat. *genu*, OE. *cnēo*, Skr. *jánu*, *knee*; *γνωτός*, Lat. (*g)nōtus*, O.Ir. *gnāth*, Skr. *jñātāh*, *known*, OE. *cnāwan*, O.Slav. *znati*, *to know*; *ἀγρός*, Lat. *ager*, Goth. *akrs*, Skr. *ájrah*, *field, acre*; *ἄγω*, Lat. *ago*, O.Ir. *agim*, Skr. *ájāmi*, *I drive*; *ἐγώ*, Lat. *ego*, OE. *ic*, *I*; *ἔργον*, OE. *weorc*, *work*; *ἀμέλγω*, Lat. *mulgeo*, M.Ir. *bligim*, OE. *meolce*, Lith. *mélžu*, *I milk*, Skr. *mrjáti*, *he wipes, rubs*.

§ 189. Medial *γν*, *γμ* became *γν*, *γμ*, as in *γιγνώσκω*, *γίγνομαι*, *στυγνός*, *ἀγρός*. This explains why the guttural nasal came to be expressed by *γ* in Greek (§ 155). At a later period *γν* was simplified to *ν*, as *γινώσκω*, *γίνομαι*. The *ν* occurs on inscriptions in Ion. already in the fifth and in Att. about the end of the fourth century B.C.

§ 190. *gj* became *ξ*, as *ἄξομαι* from **ἄγγομαι*, *I stand in awe of*, Skr. *yájatē*, *he honours*; *ἀρπάξω* from **ἀρπαγγω*. See § 129, 8.

§ 191. *γ* became *κ* before voiceless consonants, as *λέξω*, *λέλεκται* : *λέγω*. See § 106.

kh

§ 192. *kh* was one of the rarest sounds in the parent Indg. language. It was generally preserved in Greek, but in prim. Latin it fell together with original *gh*, and in the prim. Keltic, Germanic and Baltic-Slavonic languages with original *k*. It is doubtful what simple *kh* would have become in Sanskrit, because it only occurs in the original combination *skh* which became *ch* initially and *cch* medially.—*σχίζω*, Lat. *scindo*, *I split*, Skr. *chinátti* from

*skhinátti, *he splits*, OE. scādan, *to divide*; σχάω, *I slit*, Skr. chyáti, *he slits*, see § 102.

gh

§ 193. Indg. gh (= Lat. h medially between vowels and also initially before vowels except u, f initially before u, g before and after consonants, O.Ir. g, Germanic g, ȝ, Skr. h, Lith. ž, O.Slav. z) became voiceless χ in Greek, as χιών, Skr. himáḥ, *snow*; χειμών, Lat. hiems, O.Ir. gaim, Lith. žémà, O.Slav. zima, *winter*, Skr. héman, *in winter*; χαμάλ, *on the ground*, Lat. humus, Lith. žémē, O.Slav. zemlja, *earth, ground*; χέ(Ϝ)ω, Lat. fundo, OE. gēote, *I pour*, Skr. hutáḥ, *poured, sacrificed*; χήν, Lat. (h)anser, OE. gōs, Skr. hásáḥ, *goose*; λείχω, Lat. lingo, O.Ir. ligim, Skr. rēhmi, lēhmi, Lith. lēžiū, O.Slav. lizä, *I lick*; Pamph. φέχω, Lat. veho, OE. wege, Skr. vāhāmi, Lith. vežū, O.Slav. vezä, *I bear, carry, move*; ḏyxω, Lat. ango, *I press tight*, Skr. áhas, *need, distress*, OE. enge, *narrow*; πῆχυς, *fore-arm*, Skr. bāhúḥ, *arm*.

§ 194. ghj became ττ in Att. and σσ in Ion., as Att. θάττων, Ion. θάσσων : ταχύς, τάχιστος. See § 129, 7.

2. THE PURE VELARS.

q

§ 195. Indg. q (= Lat. O.Ir. c, Germanic h ; g, ȝ, Skr. k but c before i, and a = Indg. e, Lith. k, O.Slav. k but č before palatal vowels) became κ in Greek initially and generally also medially, as καρκίνος, Lat. cancer, Skr. karkaṭah, *crab*; κάλυξ, Skr. kalikā, *flower-bud*; καρπός, *fruit*, Lat. carpo, *I pluck, pick*, OE. hærfest, *autumn*, Skr. kṛpāṇah, *sword*, Lith. kerpi, *I shear*; καλέω, Lat. calo, *I call, call out*, Lith. kalbā, *speech*; καλός, Skr. kalyāṇah, *beautiful*; κελαινός, Skr. kālah, *black*, cp. Lat. cāligo; κέλλω, *I drive*, Skr. käláyati, *kaláyati, he drives*, Lat. celer, *quick*; κολωνός, Lat. collis, *hill*, Lith. kálnas,

mountain; *κρέας*, *flesh*, OE. *hrā(w)*, *corpse*, *carrion*, Skr. *kravīś-*, *raw meat*, Lat. *cruor*, O.Ir. *crū*, Lith. *kraūjas*, *blood*, *gore*; *ἄγκων*, *ἄγκος*, O.Lat. *ancus*, Skr. *áṅkas*, *bend*, *hollow*, Lith. *anka*, *loop*, *knot*; *ζευκτός*, Lat. *junctus*, Skr. *yuktāḥ*, Lith. *júnktas*, *yoked*; *μεῖραξ*, Skr. *maryakāḥ*, *boy*, *young man*.

§ 196. *qj* became *rr* in Att. and *σσ* in Ion., as Att. *πλήγτω*, Ion. *πλήσσω*, root **plāq-*. See § 129, 7.

g

§ 197. Indg. *g* (= Lat. O.Ir. *g*, Germanic *k*, Skr. *g* but *j* before *i*, and *a* = Indg. *e*, Lith. *g*, O.Slav. *g* but *ž* before palatal vowels) became *γ* in Greek initially and generally also medially, as *γέραvos*, Lat. *grūs*, OE. *cran*, Lith. *gérvē*, *crane*; *ἄyos*, *guilt*, Skr. *ágas-*, *offence*, *crime*, *sin*; *ἄyopā*, *assembly*, *ἀyέípω*, *I assemble*, Lat. *grex*, *herd*, *flock*, O.Ir. *graig*, *herd of horses*, Skr. *grámah*, *crowd*; *ξyγόν*, Lat. *jugum*, Goth. *juk*, Skr. *yugám*, O.Slav. *igo*, *yoke*; *σtέyos*, *téyos*, OE. *þæc*, Lith. *stógas*, *roof*, O.Ir. *teg*, *house*: *σtέyω*, Lat. *tego*, *I cover*, Skr. *sthágati*, *sthagayati*, *he hides, conceals*.

§ 198. *gj* became *ξ*, as *σtίξω* from **σtίγjω* : *σtίγma*, cp. Skr. *tigmáḥ*, *pointed, sharp*, Lat. *in-stigo*. See § 129, 8.

§ 199. *γ* became *κ* before voiceless consonants, as *σtέξω* : *σtέyω*; *αύξω*, *αύξάνω* : Lat. *augeo*, Goth. *áuka*, Lith. *áugu*, *I grow, increase, add*. See § 106.

qh

§ 200. *qh* was of rare occurrence in the parent language. It became *χ* in Greek, *kh* but *ch* before *i* and *a* = Indg. *e* in Sanskrit; in prim. Lat. it fell together with original *gh*, *gh*, in prim. Keltic and Germanic with original *k*, *q*, in Lith. and O.Slav. with original *q*. *καχάξω*, *I laugh*, Skr. *kakhati*, *he laughs*; *κόγχος*, Lat. *congius* (*a small liquid measure*), Skr. *śaṅkháḥ*, *muscle*, see § 102.

gh

§ 201. Indg. gh (= Skr. gh but h before i, and a = Indg. e, Lat. h initially before and medially between vowels, g before and after consonants, O.Ir. g, Germanic g, z, Lith. g, O.Slav. g but ž before palatal vowels) became voiceless χ in Greek, as *χαλκός*, brass, Lith. *gelezis*, iron; *χανδάνω*, I lay hold of, Lat. pre-hendo, I seize, Goth. bi-gita, I find, O.Slav. gadaję, I guess, divine; δολιχός, Lat. longus, OE. lang, Skr. dīrghāḥ, long; λέχος, O.Ir. lige, bed, Goth. ligān, O.Slav. ležati, to lie down; ὁμύχλη, Lith. miglā, fog, mist, Skr. mēghāḥ, cloud; στείχω, O.Ir. tiagu, I go, OE. stīge, I rise, O.Slav. stigna, I come.

3. THE LABIALIZED VELARS.

q^w

§ 202. Indg. q^w (= Lat. qu before vowels except u, but c before u and consonants, O.Ir. c, Germanic hw, h; z w, z, w; f, b (§ 181), Skr. k but c before i, and a = Indg. e, Lith. k, O.Slav. k but č before palatal vowels) had a threefold development in Greek. It became π before all sounds except i, ε, u and j; τ before ι and ε; κ before and after ν, as πόθεν, whence, Lat. quis, O.Ir. cia, OE. hwā, Skr. kāḥ, Lith. kās, who?; πότερος, OE. hwæþer, Skr. katarāḥ, which of two?; πρίασθαι, to buy, Skr. krināmi, I buy; ποινή: τίσις, penalty, Skr. cāyatē, he avenges, punishes; πάλαι, long ago, formerly, Skr. caramāḥ, the last; λείπω, Lat. linquo, O.Ir. lēcim, Lith. lēkù, I leave, Skr. riṇākti, he leaves, Goth. leihvan, to lend; ἔπομαι, Lat. sequor, Lith. sekū, I follow, Skr. sácatē, he follows; ἥπαρ, Lat. jecur, Skr. yákṛt, Lith. pl. jeknos, liver; πεπτός, Lat. coctus, Skr. paktāḥ, cooked.

τίς, τί, Lat. quis, quid, Oscan pis, pid, Skr. indef. pronoun cid; Hom. τέο, Goth. hvis, O.Slav. česo, whose?; τέτταρες, τέσσαρες, Lat. quattuor, O.Ir. cethir, Goth.

fidwōr, Skr. *catvárah*, Lith. *keturi*, *four*; τε, Lat. ·que, Skr. ca, *and*; τέλος : πάλαι; τίσις : ποινή; πέντε, Lat. quīnque, O.Ir. cōic, Goth. fimf, Skr. páñca, Lith. penki, *five*.

λύκος, Goth. wulfs, Skr. vṛkṣah, *wolf*; νύξ, νυκτός, Lat. nox, noctis, Goth. nahts, Skr. nákti-, Lith. naktis, *night*; κύκλος, OE. hwēol, Skr. cakrāh, *wheel*; θαλυκρός : θάλπος.

NOTE.—1. Forms derived from the pronominal stem qʷo- have κ instead of π, especially in the Ionic dialect of Herodotus and Herondas, as κόστος, κότερος, κοῦ, κοῦς, κῶς, ὁκως, but only the regular forms with π are found on Ion. inscriptions; in Thess. κις also occurs beside τις. It is difficult to account for the κ-forms unless we may suppose that they first arose in combination with the negative particle, as in οὐκως, οὐκις, where the original velar would regularly become κ because of the preceding ν. In like manner may also be explained πολλάκις a new formation for older *πολύκις.

2. In the Aeolic dialects π occurs beside τ before palatal vowels, as Lesb. πέσσυρες, Hom. πίσυρες, Boeot. πέτταρες, beside Att. τέτταρες; Lesb. Thess. πέμπε beside πέντε; Thess. πένται beside Att. τεῖσαι.

3. Forms like λείπεις, λείπει, λείπετε were due to levelling out the regular π-forms λείπω, λείπομεν, λείποντι; and similarly gen. ἔπεος for *ἔπεος, with π from ἔπος.

§ 203. qʷj became ττ, σσ, as Att. πέττω, Ion. πέσσω : πέψω, πεπτός, Lat. coquo, O.Slav. peka, *I cook, bake*, Skr. pácati, *he cooks*. See § 129, 7.

§ 204. πμ became μμ, as λέλειμμαι : λείπω; ὅμμα from *ὅπμα, cp. Lat. oculus, Lith. akis, *eye*. See § 117.

gʷ

§ 205. Indg. gʷ (= Lat. v but gu after n, and g when the labialized element had been lost, O.Ir. b but g before old j, Germanic kw, k, Skr. g but j before i, and a = Indg. e, Lith. g, O.Slav. g but ž before palatal vowels) had

a threefold development in Greek. It became β before all sounds except ϵ , v and j ; δ before ϵ ; γ before and after v , as $\beta\alpha\bar{\imath}\omega$, *I go*, Lat. *venio*, Goth. *qima*, *I come*, Skr. *gámati*, *he goes*, *ja-gáma*, *he has gone*; $\beta\bar{\alpha}l\bar{\alpha}v\bar{o}s$, Lat. *glans*, Lith. *gilié*, *acorn*; $\beta\bar{\alpha}ll\bar{\alpha}$, *I throw*, Skr. *gálati*, *he trickles down*; Boeot. $\beta\alpha\bar{n}\bar{a}$, O.Ir. *ben*, Goth. *qinō*, OE. *cwene*, O.Slav. *žena*, *woman*, Skr. *gná*, *wife of a god*; $\beta\alpha\bar{r}\bar{u}s$, Lat. *gravis*, Goth. *kaúrus*, Skr. *gurúḥ*, *heavy*; $\beta o\bar{u}s$, Skr. *gáuh*, *ox*, O.Ir. *bō*, OE. *cū*, *cow*, Lat. *bōs* for **vōs* is an Umbrian-Samnitic loanword; Att. *βούλεται*: Dor. *δήλεται*; *ἐρεβός*, Goth. *riqis*, Skr. *rájas*, *darkness*; *ἔβην*, *ἔβāν*, *I went*, Skr. *ágāt*, *he went*; *τάρβος*, *fright*, Lat. *torvos*, *fierce, grim*, Skr. *tárjati*, *he threatens*; *φέβομαι*, *I flee from*, Lith. *bégu*, *I flee, run*.

$\delta\epsilon\lambda\phi\bar{u}s$, Skr. *gárbhah*, *matrix*; *ἀδήν*, *gland*, Lat. *inguem*, *groin*; Dor. *δήλεται*: Att. *βούλεται*.

In a few words β occurs before i where we should regularly expect δ , as $\beta\bar{a}\bar{a}$, *bodily strength, force, might*, Skr. *jyā*, *jiyā*, *supreme power, upper hand*; $\beta\bar{io}s$, *life*, Lat. *vīvos*, O.Ir. *bīu*, Goth. *qius*, Skr. *jīvāḥ*, *alive*; $\beta i\bar{o}s$, *bow*, Skr. *jyā*, *bow-string*. These forms have never been satisfactorily explained. Some scholars assume that *g^wi* regularly became βi and that *διερός* is not etymologically connected with Skr. *jirāḥ*.

γυνή : Boeot. $\beta\alpha\bar{n}\bar{a}$; *φεύγω*, *ἔφυγον* : *φέβομαι*; gen. *οἰνό-φλυγος* : gen. *φλεβός*; *ὑγιής*, *sound, healthy*, lit. *well living* : *βίος*.

NOTE.—1. In the Aeolic dialects β occurs beside δ before palatal vowels, as Lesb. *βέλφīν*, Boeot. *βελφīn* : Att. *δελφīn*; Boeot. *βειλόμενος*, Thess. *βέλλεται* : Dor. *δήλεται*, Att. *βούλεται*.

2. Forms like *φοβέω*, *φοβέομαι* were new formations after the analogy of *φέβομαι*; and similarly gen. *ἐρέβεος* for **ἐρέδεος*, with β from *ἐρεβός*.

§ 206. *g^wj* became ζ , as *νίξει*, O.Ir. *nigid*, *he washes*,

Skr. *nij-*, *wash*; λάζομαι : λαμβάνω, λαβεῖν ; ζῆν : βιῶναι, βίος. See § 129, 8.

§ 207. βν became μν, as ἀμνός from *ἀβνός, Lat. *agnus* ; σεμνός : σέβομαι ; ἐρεμνός : ἐρεβος. See § 117.

qʷʰ

§ 208. qʷʰ was a rare sound in the parent language. In Skr. it fell together with original qh, in Lat. and Gr. with gʷʰ, in Keltic and Germanic with qʷ, in Lith. and O.Slav. with q, qʷ. φάλλη, OE. *hwæl*, *whale* ; σφάλλομαι, *I stumble*, Skr. *skhalatē*, *he stumbles*. See § 102.

gʷʰ

§ 209. Indg. gʷʰ (= Lat. f initially, v medially except that after n it became gu, O.Ir. g, Germanic ȝw, ȝ, w, Skr. gh but h before i, and a = Indg. e, Lith. g, O.Slav. g but ž before palatal vowels) had a threefold development in Greek. It became φ before all sounds except ε, ν and j; θ before ε ; χ before and after ν, as φατός, Skr. *hatáḥ* for *ghatáḥ, *killed, slain* : φόνος, θείνω ; φαιδρός, *beaming, radiant*, Lith. *gaidrūs*, *serene, clear* ; ἐλαφρός : ἐλαχύς ; ἀλφή older *ἀλφά, *produce, gain*, Lith. algà, *pay, reward* ; ὁσ-φραίνομαι, *I smell*, Skr. *ghráti*, *he smells* ; acc. νίφα, Lat. *nivem*, nom. Lith. snēgas, Goth. snáiws, OE. snāw, *snow* ; νείφει, νίφει with φ for θ from forms like νίφων, νιφόμενος, Lat. *ninguit*, Lith. sniñga, *it snows*, O.Ir. snigid, *it rains* ; ὅφις, Skr. áhiḥ, Lith. angls, Lat. *anguis, snake, serpent*.

θερμός, Lat. *formus*, OE. *wearm, warm*, Skr. *gharmáḥ, glow, heat*, O.Ir. *guirim, I heat*, O.Slav. *gorěti, to burn* ; θείνω, Lat. *of-fendo, I strike*, O.Ir. *gonim, I wound, kill*, Skr. hánti, *he strikes, slays, ghnánti, they strike*.

ἐλαχύς, *small, little*, Skr. *laghúḥ, light, quick* : ἐλαφρός ; εὐχομαι, *I pray*, Skr. *vāghát-*, *institutor of a sacrifice* ;

δνυξ, δνυχος, Lat. *unguis*, O.Ir. *ingen*, Lith. *nāgas*, *claw, nail*.

§ 210. *gʷʰhj* became *ττ, σσ*, as ἐλάττων, ἐλάσσων : ἐλαχύς.
See § 129, 7.

THE SPIRANTS.

§ 211. The Indg. parent language had at least the two spirants *s* and *z*. *s* occurred both initially, medially and finally. *z* only occurred in combination with a following media or media aspirata. In those languages where the mediae and mediae aspiratae became voiceless the *z* also became voiceless at the same time, as Goth. *asts* beside δξος, Indg. *ozdos, *branch, twig*; μισθός beside Goth. mizdō, O.Slav. *mīzda, pay, reward*. See §§ 224-6.

s

§ 212. Indg. *s* remained in the oldest Greek in the following cases :—

1. In combination with voiceless explosives, as *σπαίρω*, *I struggle convulsively*, Lith. *spiriù*, *I push with the foot* : Lat. *spernere, to despise*, OE. *spornan, spurnan, to kick* ; ἔσπερος, Lat. *vesper* ; *στατός*, Lat. *status* ; ἔστι, Skr. *ásti*, Lat. *est*, Goth. *ist*, Lith. *ësti, is* ; *σκότος, darkness, gloom*, Goth. *skadus*, OE. *sceadu, shade, shadow* ; γιγνόσκω, Lat. *nōscō* ; *σφάλλομαι, I stumble*, Skr. *skhalatē, he stumbles* ; *σχίζω*, Lat. *scindo* ; λείψω, γράψω : λείβω, γράφω ; δξων, Lat. *axis* ; λέξω : λέγω. But *τσ* became *σσ, σ*, as Hom. ποσσί, Att. ποσί beside Skr. *patsú*, see § 186.

NOTE.—Forms like *τέγος*, OE. *bæc, roof*, O.Ir. *teg, house*, beside *στέγος*, Lith. *stógas, roof*, probably existed already in the parent language, see § 112.

2. Intervocalic *σσ* became simplified to *σ* in Attic, as aor. Hom. ζέσσα, Att. ἔζεσσα : ζέω, Skr. *yásāmi, I seethe, bubble* ; Hom. ἐτέλεσσα, Att. ἐτέλεσσα : τελέω from *τελέσω ; Hom.

ἕπεσσι, ἕπεσι, Att. ἕπεσι = Skr. *vácaṣsu*. But before and after consonants *σσ* became simplified to *σ* in all the dialects, as δύστηνος from *δύσ-στῆνος; loc. pl. Att. *μησί*, Cret. *μηνσί* from *μηνσ-σι; late Gr. aor. *τέρσασθαι* from *τέρσσασθαι : *τέρσομαι*.

3. In combination with a preceding liquid (see however § 217), as τέλσον : *τέλος*; κέλσω, ἔκελσα : *κέλλω*; Hom. θάρσος, Lesb. θέρσος; Hom. ἄρσην, Ion. ἔρσην; Ion. κόρση. This *ρσ* became *ρρ* in Att., as θάρρος, ἄρρην, κόρρη.

4. Finally, as λύκος, Lat. *lupus*, Goth. *wulfs*, *wolf*; ἥδιστος, Goth. *sutists*, *sweetest*; τίς, Lat. *quis*; φέροις, Goth. *baíráis*, *thou mayest bear*.

§ 213. *s* became *h* in prim. Greek initially before vowels and medially between vowels, and then in the latter case the *h* disappeared altogether.

1. Initially: ἀλλοματι, Lat. *salio*; ἀλς, Lat. *sāl*, OE. *sealt*, *salt*; ἑδος, Skr. *sáda-*, Lat. *sēdes*, *seat*; ἔνος, Skr. *sánah*, Lat. *sen-ex*, Goth. *sin-eigs*, Lith. *sēnas*, *old*; ἔρπω, Skr. *sárpāmi*, Lat. *serpo*, *I creep*; ἔπτα, Skr. *saptá*, Lat. *septem*, O.Ir. *secht*, Goth. *sibun*, Lith. *septyni*, *seven*; ἔπεται, Skr. *sácatē*, Lat. *sequitur*, *he follows*; ἡμι-, Skr. *sāmī*, Lat. *sēmi-*, *half*; ὁ, Skr. *sá*, Goth. *sa*, *the*; it is difficult to account for *σūs* beside *ῦs*, Lat. *sūs*, OE. *sū*, *sow*, *pig*.

Initial *h*- disappeared in the prehistoric period of Greek when the next syllable or the next but one began with an aspirate, as ἔχω : ἔξω, σχήσω; ἵσχω from *ἵσχω older *σίσχω; αὖος from *αὐνός older *havhos, Lith. *saūsas*, *dry*; ἔδεθλον, *bottom* : ἔδος, Skr. *sáda-*, *seat*; ἀμόθεν : ἀμῶς. See § 115.

NOTE.—In the prehistoric period of some of the Doric dialects and in the Lesb., Elean and Asiatic-Ionic dialects the *spiritus asper* became the *spiritus lenis*.

2. Medially (=Lat. *r*, Goth. *z* but *r* in the other Germanic languages): Aeol. *aú̄ws*, Ion. *ἡώ̄s*, Att. *ἔω̄s*, from *āusōs, Lat. aurōra; gen. γένεος = Skr. jánasah, Lat. generis; Hom. ἡ̄a, Skr. ásam, *I was*; ἥδιων from *στᾶδίσων, Goth. sutiza, OE. swētra, sweeter; tōs, Lat. virus; gen. μνόs, Lat. mūris; νέομαι, *I come*, Skr. násatē, *he joins*; οὔσατ-, Lat. auris, OE. ēare, ear; gen. pl. fem. Hom. τάων, Skr. tásam, Lat. is-tārum, Goth. þizō, masc. Goth. þizē, OE. þāra, *of the*; φέρεαι, φέρη = Skr. bhárasē, Goth. baíraza.

See § 129, 9 for initial and medial *sj*; and § 124, 5 for initial and medial *sw*.

§ 214. Initial *sm*, *sn* became *μ*, *ν* through the intermediate stage of *μμ*, *νν*, as μειδάω, *I smile*, Skr. smáyatē, *he smiles*: Hom. φιλο-μμειδῆς; μείρομαι, *I receive as my due*, Skr. smártati, *he remembers*: Hom. ἔ-μμορε; μέλδω, OHG. smilzu, *I melt*; μία from *σμια : ἔν, Lat. sem-el; νέω, *I spin*, O.Ir. snāthe, *thread*: Hom. ἔ-ννεον; acc. νίφα, Lat. nivem, nom. OE. snāw, Lith. snēgas, *snow*: ἀγά-ννιφος; νόος, *mind*, OE. snot(t)or, *prudent, wise*; νυός, Skr. snuśā, Lat. nurus, OE. snoru, *daughter-in-law*. It is difficult to account for the σμ- in σμερδαλέος, σμερδνός, *terrible*, OE. smeortan, *to smart*; σμίλη, *knife for cutting or carving*, OE. smiþ, smih, *carpenter*; σμίκρός *beside μίκρος*; σμύχω, *I burn in a smouldering fire*, OE. smēocan, *to smoke*.

Medial *sm*, *sn* became *μμ*, *νν*, which remained in Lesb. and Thess., but became *μ*, *ν* with lengthening of the preceding vowel in the other dialects, as Lesb. Thess. ἔμμι, Att. Ion. ἐμμί, Dor. ἥμι, Skr. ásmi, Lith. esmī, *I am*; Att. ἥμεν, Skr. ásma, *we were*; Lesb. ἄμμες, Att. Ion. ἥμεῖς, Dor. Boeot. ἄμές, Skr. asmá-, *we*; Lesb. σελάννα, Att. σελήνη, from *σελάσνα; Lesb. φάεννος, Ion. φαεινός, Att. φᾶνός, from *φαεσνός; Ion. εἴνυμι from *φεσνῦμι.

§ 215. Initial *sr*, *sl* became *ρ*, *λ* through the intermediate stage of *ρρ*, *λλ*, as ρεῖ, Skr. srávati, *he flows*: Hom. ἔ-ρρεον;

ρόφεω, Lith. *srebìù*, *I gulp down*; λείβω, Lat. *lībo*, *I pour out*, OHG. *slifan*, *to slide, glide* : Hom. ὅφρα λλείψαντε; λῆγω, *I cease*, NE. *slack* : Hom. ἀλληκτος.

Medial sr, sl became pp, λλ, which remained in Lesb. after short vowels, but became ρ, λ with lengthening of the preceding vowel in the other dialects, as Hom. τρήρων from *τράσρων : τρέ(σ)ω; ναύκραπος from *ναύκρασρος; Lesb. χέλλιοι, Att. Ion. χείλιοι, Skr. sa-hásram, *thousand*; Lesb. ἔλλαος, Att. ἔλαος, from *σισλαφος.

Medial sr, sl became ρ, λ after long vowels and diphthongs already in prim. Greek, as αὔριον from *αὔσριον, *to-morrow*, Skr. उर्साः, *matutinal*; σειρός from *σεισρός : σέσεισμαι; θραυλός from *θρανσλός : *θραυστός*.

§ 216. Antevocalic ms, ns became μμ, νν, which remained in Lesbian and Thessalian, but became μ, ν with lengthening of the preceding vowel in the other dialects, as Lesb. ἔνεμμα, Att. Ion. ἔνειμα, Dor. ἔνημα : νέμω; ὀμος from *ώμρος, Lat. *umerus*, Goth. ams, *shoulder*; ἔγημμα from *ἔγαμμα : γαμέω. Gen. Lesb. μῆννος, Thess. μεινός, Dor. Att. Ion. μηνός, Lat. mēnsis; gen. χηνός : Lat. anser, German *gans*, *goose*; Lesb. ἔμεννα, Att. Ion. ἔμενα, Dor. ἔμηνα : μένω; ἔφηνα, ἔφαννα from *ἔφανσα : φαίνω; and similarly ἔκτεινα, ἔτεινα, ἔθεινα, ὑφηνα, ἔκερδανα, Ion. ἔκέρδηνα, ἔξήρανα, ὄνόμηνα.

§ 217. Antevocalic ls, rs. It is doubtful what is the regular development of these combinations in Greek. Some scholars assume that they regularly remained in prim. Greek when immediately preceded by the accent and that rs then became pp in Attic, but that in other cases they had the same development as antevocalic ms, ns (§ 216). Other scholars assume that ls, rs regularly remained except that the latter combination became pp in Attic, and that aorists like ἔπηλα : πάλλω, ἔσφηλα : σφάλλω, ἔστειλα : στέλλω, ἤγγειλα : ἀγγέλλω, ἔτιλα : τίλλω, ἔδειρα : δέρω, ἔφθειρα : φθείρω, ἔστρα : στρῶ were new formations

after the analogy of ἔνειμα : νέμω, ἔμεινα : μένω, &c. ἔκελσα : κέλλω, ἔκερσα : κείρω, ὥρσα : ὅρυμι ; Hom. θάρσος, Lesb. θέρσος, Att. θάρρος ; θαρσέω, Att. θαρρέω ; Hom. ἄρσην, Ion. Cret. ἔρσην, Att. ἄρρην ; κόρση, Att. κόρρη : κουρεύσ, οὐρά : Att. ὄρρος. See however § 212, 3.

§ 218. s between a tenuis and a following liquid or nasal became h and then combined with the preceding tenuis to form a tenuis aspirata, as στιφρός from *στιπσρός : στιβαρός ; λύχνος from *λυκνός : Lat. lūna from *louksnā. For further examples see § 185.

§ 219. When intervocalic -h- from -σ- belonged to the second vowel it became transposed so as to stand in front of the first vowel, as Hom. εῦω, Lat. ūro, *I burn, singe*, Skr. ὁशति, *he burns* ; Hom. Att. iερός, Dor. Boeot. Thess. iαρός, *holy*, Skr. iṣirāḥ, *swift, active, strong* ; εἰπόμην from *éhēpóμην : ἐπομαι, Lat. sequor. But if the first vowel was preceded by a tenuis the tenuis became tenuis aspirata, as φροῦδος from *προ-ἱοδος ; φρουρά, Ion. φρουρή from *προ-ἱορᾶ.

§ 220. When a tenuis came to stand before h, it combined with the h to form a tenuis aspirata, as καθίξω : ἵξω ; ἐφίστημι : ἴστημι ; and similarly in ἀφίημι : ἵημι ; ἐφιππος, τέθριππον : ἵππος.

§ 221. Interconsonantal s disappeared when the first consonant was not a nasal and the last consonant was not w or j, but in the combination ksk the first consonant disappeared (§ 186), as ἀλτο, ἀλμενος : ἀλλομαι, πάλτο : ἔπηλα, ἔσταλτο : στέλλω, ἄρμενος : ἥρσα, ὥρτο : ὥρσα, πτέρνα from *πτέρσνα ; Hom. λέκτο : ἔλεξα, and similarly δέκτο, ἔμικτο, κατέπηκτο ; ἔκτος : ἔξ, ἔκτείνω, ἐκφέρω from *ἐκστείνω, *ἐκσφέρω ; γεγράφθαι from *γεγράπσθαι : γράφω, and similarly δέχθαι, πεπλέχθαι, λελεῖφθαι, τετράφθαι, τετρίφθαι.

§ 222. The prepositional forms ἐξ, ἐκ, ἐς (Boeot. and Thessal.) were due to sandhi relations. ἐξ regularly

occurred before a following vowel, ēk before consonants (except κ), and ēs before κ (§ 186).

§ 223. tsn became nn through the intermediate stage zn, as βλέννος from *βλετσνός, mucous matter, Skr. mr̥tsná, clay; δέννος from *δετσνός, see § 117.

z

§ 224. Indg. z (generally written σ before β, γ) remained before voiced mediae, but before voiced aspiratae it became voiceless at the same time the voiced aspiratae became voiceless (§ 103), as ī́ω from *sizdō, Lat. sido; ð́os, Lesb. ὕσδος, Goth. asts, from *ozdos, branch, twig; μίσγω from *mizgō, I mix, Lith. mazgóti, to wash; and similarly πρέσβυς, σβέννυμι. μισθός from *mizdhos, Goth. mizdō, pay, reward; ȝθi, Zend zdī from *zdhi, be thou; μόσχος from *mozghos, Lith. māzgas, sprout, bud; ἔσχον from *ezghom.

sh, zh

§ 225. The spirants sh, zh only occurred in combination with tenues and mediae and arose in prim. Indo-Germanic from the combinations tenues aspiratae and mediae aspiratae + s, as tsh, psh, ksh, qsh; dzh, bzh, gzh, gzh from older ths, phs, khs, qhs; dhs, bhs, ghs, ghs. These combinations had in Greek the same development as the original tenues + s, cp. fut. πέίσομαι: πένθος, grief, sorrow, Lith. kę̄siu, I suffer, prim. Indg. *qent-sh- from *qenth-s-; ψώω, I rub in pieces: Skr. psáti, he chews, prim. Indg. *bzhō- from *bhsō-; ȝévos : Lat. hostis, prim. Indg. *gžhen-, from *ghsen-.

þ, þh ; ð, ðh

§ 226. þ and ð only occurred after palatals and velars which were originally unaspirated, as kþ, qþ, gð, gd̥. þh and ðh only occurred after palatals and velars which were originally aspirated, as kþh, qþh, gðh, gd̥h from older

khþ, qhþ, ghð, ghð. In the present state of our knowledge it is impossible to determine how these four spirants were pronounced in the parent language. In Greek they became t-sounds, and in Sanskrit, Latin, Germanic and the Baltic-Slavonic languages they became s-sounds :—(kþ), *κτίσις* : Skr. *kṣitíḥ*, *abode*; ἄρκτος : Skr. *śkṣaḥ*, *bear*; *τέκτων* : Skr. *tákṣan-*, *carpenter*; (qþ), *κτείνω* : Skr. *kṣanóti*, *he wounds, injures*; (qþh), *φθίνω* : Skr. *kṣináti*, *he destroys*; (gðh), *χθών* : Skr. *kṣam-*, *earth*.

j

§ 227. It is doubtful whether the parent Indg. language had a spirant j beside i-consonant (§ 118). The initial *ξ*, which occurs in a few Greek words where the other Indg. languages have i-consonant, is probably due to a sound-change which took place in prim. Greek under conditions that have not yet been discovered. Examples are :—*ξειά*, *spelt*, Skr. *yávah*, *grain, corn*; *ζέω*, Skr. *yásāmi*, *I seethe*, OHG. *jesan*, *to ferment*; *ξυγόν*, Skr. *yugám*, Lat. *jugum*, Goth. *juk*, *yoke*; *ξύμη*, *leaven*, Skr. *yūśam*, *broth*, Lat. *jūs*.

CHAPTER VII

SANDHI

§ 228. By sandhi is meant the changes which the initial and final sounds of words undergo when used in a word-group or sentence. The term is borrowed from the Sanskrit grammarians and means *combination*, lit. *putting together*. In dealing with sandhi it is necessary to distinguish between the sounds which begin and end a word-group or sentence and those which occur medially. In the former case the sound-changes are the same as those which take place at the beginning or end of a word when used alone, but in the latter case the changes are subject to the same laws which

obtain for the medial parts of a word. The result of these twofold changes often gives rise to what are called sentence-doublets. At a later period these sentence-doublets not unfrequently come to be used beyond their original sphere and then one of the forms becomes generalized and the other dies out. Greek like all the other Indg. languages has numerous examples of this kind, but for our present purpose two or three examples will suffice. In prim. Indg. *-j* alternated with *-i* in sandhi. The former was used when the next word began with a vowel and the latter when it began with a consonant, as in *πρός* from **προτj* (§ 187) beside *προτί*, cp. *προσ-έθηκα* like Skr. *práty adhām*, but *προτι-θήσω* like Skr. *práti dhāsyāmi*. *πρός* then came to be used before consonants and became generalized in Attic, whereas *προτί* survived and *πρός* disappeared in other dialects. Prepositional forms like *ἀν'*, *ἀπ'*, *κατ'*, *ὑπ'*, regularly arose by elision when the next word began with a vowel, but already in Homer they came to be used before a following consonant and even underwent assimilation with it, as *καββάλλω*, *ὑββάλλω* beside *κατα-βάλλω*, *ὑποβάλλω*. The original ending of the acc. plural of o-stems was *-ons*. This remained in prim. Greek in pausa and when the next word began with a vowel, but became *-os* when the next word began with a consonant (§ 153). The former became generalized in Att. Ion. mild Dor. *-ous*, Boeot. and severe Dor. *-ωs*, Lesb. *-oīs*, and the latter in Arcad. and Thess. *-os*, whereas in Cretan the *-oīs* and *-os* existed side by side. The nom. singular of n-stems originally ended partly in *-ēn*, *-ōn* and partly in *-ē*, *-ō* (§ 29). The former became generalized in Greek, the latter in Sanskrit, Latin and Lithuanian, whereas in prim. Germanic the two forms were preserved side by side. We have already seen in other parts of the Phonology that the sound-laws, which govern the pause form of a word, vary considerably in the different languages, but

this is infinitely more so in regard to the laws of sandhi. It would therefore be beyond the plan and scope of this grammar to treat the subject from a comparative point of view. The phenomena of sandhi can be conveniently divided into two categories according as they relate to the end or the beginning of a word.

I. FINAL SOUNDS.

§ 229. All vowels and diphthongs remained when absolutely final, as *οἶδα*, *ἄγε*, *λύκε*, *ἐστί*, *πρό*, *δάκρυ*, *μέθν*, Dor. *τῖμᾶ*, Att. Ion. *τīμή*, *δύω*, *φέρω*, *φέρεται*, *λύκοι*, *φερόμενοι*, *αῦ*, *Ζεῦ*, *θεἡ*, *λύκῳ*, &c.

The vowels -*α*, -*ε*, -*ο* were elided before a following vowel in prim. Greek, and then after the analogy of these -*i* was also elided, as *κατ'* ἀλλο, *ἀπ'* αὐτῶν, *τὰ δ'* ἀλλα, *οὐκ' ἐγώ* (*οὐ-κί*), *ἐπ'* ἀνθρώπωφ, *ἐπ'* αὐτοῦ, *λέγοιμ' ἄν*. This rule then became extended to the final vowel of the first element of compounds, as *δι-έλαβον*, *πέντ-οξος*, *ἀπ-αγωγή*, *ἀπ-αιτέω*, *ἰππ-αγωγός*, *ἐπ-αρωγός*. The *o* in *πρό*, *τό* was never elided. The antevocalic forms of prepositions were sometimes used for the anteconsonantal, cp. Hom. *ἄν*, *κάτ*, *πάρ* for *ἀνά*, *κατά*, *παρά*. Elision also took place before a following ' and after the loss of *f*, as *νύχθ'* *δλην* = *νύκτα* *δλην*, *οὐδ' εἰς*, *δ'* *ἔτος*, *ἀπ'* *ἔργου*, &c.

Beside elision we also find contraction with a following vowel (crasis). The reason for this twofold treatment is unknown. These contractions originally followed the rules for contraction in medial and final syllables (§§ 79, 80), and then at a later period the product of the contraction was determined by the quality of the initial vowel of the second word, as *τᾶλλα* = *τὰ ἀλλα*, *τᾶγαθά* = *τὰ ἀγαθά*, *τοῦνομα* = *τὸ δνομα*, *προῦργου* = *πρὸ ἔργου*, *ἐγῷδα* = *ἐγὼ οἶδα*, *ῳγαθέ* = *ῳ ἀγαθέ*, Ion. Dor. *ῳνήρ* beside Att. *ἀνήρ* = *ὁ ἀνήρ*, and similarly Att. *τᾶνδρός*, *τᾶνδρί*.

Consonantal -*i* in the combinations -*αι*, -*oi* regularly dis-

appeared in prim. Greek before a following vowel (§ 128), and then the -*a*, -*o* was either elided or contracted with the following vowel, as Hom. βούλομ' ἔγώ = βούλομαι ἔγώ, ὅς μ' ἔθελεν = ὅς μοι ἔθελεν; καλλως = κα(i) ἀλλως, καύτός = κα(i) αύτός, κᾶν = κα(i) ἄν, κάπι, Dor. κήπι = κα(i) ἐπί, τᾶρα = τοι ἄρα, ἀδελφοί = οἱ ἀδελφοί. At a later period the pausa and anteconsonantal form came to be used before vowels and then the -*i* = -*j* was preserved and pronounced as the initial of the following word, as καὶ ἐπί = κα-γεπι, Hom. ἀνδρα μοι ἔννεπε = μῷ γεννεπε.

Simple long vowels were shortened when the next word began with a vowel, hence the metrical rule :—‘vocalis ante vocalem corripitur,’ as Hom. πλάγχθῃ ἐπεὶ Τροίης, Att. αὐτῆ̄-τι, τουτοῦ-τι, Cret. μὲ ἔνδικον = μὴ ἔνδικον, see § 71.

Long diphthongs were shortened in prim. Greek when the next word began with a consonant (cp. § 70), hence -*oi*, -*ai* beside -*ω*, -*α* in the dat. singular of *o*- and *ā*-stems, the former of which became generalized in some dialects, and the latter in others, see §§ 321, 325.

§ 230. All originally final explosives disappeared, as ἔφερε, Skr. ábhārat, εἴη, Skr. syát, O.Lat. siet, μέλι : μέλιτος, voc. γέρον, χαρίεν : γέροντος, χαρίεντος. τί, Lat. quid, ἔστω, O.Lat. estōd, τό, Skr. ták, Lat. is-tud, ἀλλο, Lat. aliud, κῆρ, cp. καρδίā, Lat. cord-is, voc. παῖ : παιδός. κρῖ : κριθή. voc. γύναι : γυναικός. γάλα : γάλακτος, ḡ from *ἡκτ, he spoke, voc. ἀνα : ἀνακτος.

NOTE.—Prepositional forms like ἀπ', ὑπ', κατ' regularly preserved their final consonant after the apocope of the vowel or else became assimilated to the following consonant (§ 228), and similarly with the negative οὐκ, οὐχ (before a rough breathing).

Indg. final -m became -n in prim. Greek and thus fell together with original -n, as ἔφερον, Skr. ábharam, εἴην, Skr. syám, O.Lat. siem, τόν, Skr. tam, Lat. is-tum, λύκον, Skr. vṛkam, Lat. lupum, πατρῶν, Skr. pitṛṇām ; on ἐν,

χθών, *χιών*, see § 141. Original -n and the -n from older -m became -μ before labials, -γ (= -ŋ) before gutturals, and completely assimilated to a following liquid, nasal or σ-, although the -ν was often retained in writing, as ἐμπίπτω, τὴμ πόλιν, ἐμβάλλω, συμβαίνω, ἐμφέρω; ἔγκυκλος, ἐγγενής, συγχέω; ἐλλείπω, σύλλογος, τὸλ λόγον; συρρέω; ἐμένω; σύσσωμος. On the so-called ν ἐφελκυστικόν, see §§ 306, 316.

In prim. Indg. -s alternated with -z. The former occurred in pausa and before voiceless explosives, and the latter before voiced explosives. The -z was probably preserved in Greek before voiced mediae, although it was not indicated in writing. On forms with and without final -s, as in ἀμφίς, πολλάκις, οὗτως beside ἀμφί, πολλάκι, οὗτω, see § 575.

Tenuis became aspirates before a rough breathing, as ἀφ' οῦ = ἀπ' οῦ, νύχθ' δλην = νύκτ' δλην, ἀφίημι = ἀπ-ίημι, καθαιρέω = κατ-αιρέω. -δ + rough breathing became θ, as οὐθεῖς, οὐθέν = οὐδ' εἰ̄ς, οὐδ' ἔν.

2. INITIAL SOUNDS.

§ 231. On the contraction which took place when one word ended in a vowel and the following word began with a vowel, see § 229. On the development of prothetic vowels, as in ἔρεβος, ἔρυθρός : Skr. rájah, rúdhiraḥ, see § 77.

§ 232. Forms like ξύν : σύν, ξύλινος : σύλινος, ψελλίζω : σελλίζω are probably sentence-doubles, but the conditions under which they arose are unknown.

Geminated consonants, which arose from assimilation, were preserved in prim. Greek, but became mostly simplified already in the prehistoric period of the language when the words containing them were used alone or began the sentence, as ρέî, Skr. srávati, beside ἔ-ρρει, Skr. ḍ-sravat, ρήγνῦμι : ἔ-ρρηξα, ḍ-ρρηκτος, μείρομαι : ἔ-μμορε,

λήγω : ἀ-λληκτος, μειδῆσαι : φιλο-μμειδῆς, νίφα : ἀγά-
ννιφος, Fós (*Fhós*) : Hom. πατέρι FF^θ, Hom. σεῦε : ἔ-σσευε,
σάκος : φερε-σσακῆς, Boeot. τὰ ππάματα : πᾶμα.

On forms like ἀφίημι = ἀπ-ῖημι, see § 230. The rough breathing regularly disappeared after -σ, -ν, -ρ, as in ἐσ-, ἐν-, ὑπερ-ἄλλομαι beside ἄλλομαι, but it was often restored again after the analogy of the simplex. The initial rough became the smooth breathing in Asiatic Ionic, Lesbian, Elean and in a part of the Cretan dialect.

CHAPTER VIII

THE FORMATION OF NOUNS AND ADJECTIVES

§ 233. In the formation of nouns and adjectives it is necessary to distinguish between the so-called root-nouns (§ 234) and nouns and adjectives which contain a suffix or formative element (§§ 235-86). Little is known of the origin of the numerous suffixes in the parent Indg. language and in the oldest periods of the separate languages. It is probable that most of the suffixes had originally an independent meaning and that in some cases they were independent words which sank down to be merely formative elements already in prim. Indo-Germanic. There is no reason to doubt but that many of the Indg. suffixes arose in the same or similar manner as we see them arise in the history of the individual languages, cp. the English suffixes *-dom*, *-hood*, *-ly*, all of which existed as independent words in the oldest period of the language, as *cynedōm*, *kingdom*, *frēodōm*, *freedom*, beside the simplex *dōm*, Goth. *dōms*, *judgment*; *cildhād*, *childhood*, *prēosthād*, *priesthood*, beside the simplex *hād*, *rank*, *grade*, Goth. *háidus*, *manner*; *gēarlic*, *yearly*, *mennisclic*, *human*, beside the simplex *līc*,

Goth. *leik*, *body*. It should be noted that when a suffix is added to a stem which already contains a suffix, it is called a secondary suffix, as in *φέρουσα* from **φέροντ-ja*, *μάντι-κός* : *μάντι-s*, *περυσι-νός* : *πέρυσι*. Prior to the time when case-endings, personal endings, &c. came into existence, the only difference between nouns and verbs was one of meaning and not merely of form. And this is the reason why so many of the same suffixes occur in the formation both of nouns and verbs, and similarly with reduplication, as in *βάρβαρος*, *γέργερος*, *μόρμορος*, *πάππα*, *τάτα*, *τήθη*, *ὅλολυς*, *ἔδωδή*, *παιπάλη*, *τέτανος*, &c. See § 429.

In the following paragraphs the suffixes are divided into two great classes according as they end in a vowel (§§ 235–68) or a consonant (§§ 269–86).

i. Root-Nouns.

§ 234. Root-nouns, that is nouns in which the case-endings are added to the bare root without an intervening suffix or formative element. The root-nouns originally had various ablaut-grades in the different cases, but already in the parent Indg. language the levelling out of one or other of the ablaut-grades began to take place whereby one or more of the grades entirely disappeared. This process of levelling went still further in the prehistoric period of the separate languages with the result that one or other of the grades often became generalized throughout all the case-forms. In Greek the root-nouns may be divided into two categories, viz. those which preserve two or more ablaut-grades, and those which have the same grade throughout all case-forms.

i. Nouns which preserve two or more ablaut-grades, as *πούς*, Dor. *πώς*, Skr. *pát*, Lat. *pēs*, O.E. *fōt*; acc. *πόδα*, Skr. *pádám*, Lat. *pedem* (cp. prep. *πέδα*), O.E. *fōt*; gen. *ποδός*, Skr. *padáḥ*, Lat. *pedis*, see § 342.

βοῦς from **βωυς*, Skr. *gáuh*; acc. Dor. *βῶν*, Skr. *gáṁ*; gen. *βοός*, see § 339.

Ζεύς from **djéus*, Skr. *dyáuh*; acc. *Zῆν*, Skr. *dyám*; gen. *Διός*, Skr. *diváh*, see § 337.

χθών from **χθωμ*, *χιάν* from **χιωμ*, gen. *χθονός*, *χιόνος*, see § 346.

2. Nouns which have the same ablaut-grade throughout all case-forms. The strong grade was generalized in *κρέξ*, *φλέψ*, *δόρξ*, *όψ*, *φλόξ*; the lengthened grade in *θώς*, *κλώψ*, *ρώξ*, *σκώψ*, *πτώξ*, *τρώξ*, *φώρ*, *ώψ*, *θήρ*, *κήρ* from **κηρδ* (§ 230), *ψήρ*; and the weak grade in *θρίξ*, *ἶς* (§ 330), *νίφα* (acc.), *φρίξ*, *κίς*, gen. *κιός* (§ 330), *στύξ*, *ἰχθύς*, gen. *ἰχθύος* (§ 334), and similarly *μῦς*, *όφρυς*, *ὑς*.

In *ναῦς* from **vāus*, Skr. *náuh* the long diphthong was levelled out into all the cases already in the parent Indg. language, see § 336.

2. SUFFIXES ENDING IN A VOWEL.

§ 235. -jā-. This suffix was chiefly used in the formation of feminine nouns and adjectives from the masculine of u- and consonant-stems, as *ἡδεῖα* from **σφᾶδεfja* : *ἡδύς* = Skr. *svādví* : *svādūh*, *sweet*, and similarly *βαρεῖα*, *γλυκεῖα*, *πλατεῖα*; *τέκταινα* from **τεκτανja* : *τέκτων* = Skr. *takṣṇí* : *tákṣan*, *carpenter*, and similarly *γείταινα*, *θεράπαινα*, *λέαινα*, &c.; -aina became extracted as an independent suffix for the formation of the feminine of the names of persons and animals from o-stems, as *ἡμιθέαινα*, *κάπραινα*, *λύκαινα*; *φέρουσα* from **φεροντja* : *φέροντ-* = Skr. *bhárantí* : *bhárant-*; *χαρίεσσα* from *-*fetja*; *δότειρα* from **δοτερja* : *δοτήρ* = Skr. *dātrí* : *dātár-*; Att. Dor. *γεγονεῖα* from *-*fesja*, Ion. *γεγονῦια* from *-*uṣja* : Skr. *uṣī* (§ 552); *γλώσσα* from **γλωχja*, *θῆσσα* from **θητja*, &c.; in this manner was also occasionally formed the feminine from o-stems, as *πίειρα* : *πιερός* = Skr. *pīvarí* : *pīvaráh*; *έταιρα* : *έταρος*, *μοῖρα* : *μόρος*.

On the form of the nominative singular in Greek and for further examples see § 322.

§ 236. The suffixes **-o-**, **-ā-**. The **-o-** originally formed the second syllable of dissyllabic light bases and was regular in such words as *λύκος*, Skr. *vṛkṣah*, Lat. *lupus*, from an original Indg. form *w̥lkós, *wolf*, and similarly in *ξυγόν*, Skr. *yugám*, Lat. *jugum*, *yoke*. From such words the **-o-** became extracted as a suffix and was extended to bases which had not originally the accent on the second syllable (cp. § 456). The **-o-** stood in ablaut relation to **-e-** just as in the verbal forms *φέρο-μεν* : *φέρε-τε*, cp. *λύκο-s*, Skr. *vṛka-h*, Lat. *lupu-s* : voc. *λύκε*, *vṛka*, *lupe*. In like manner the **-ā-** probably formed originally the second syllable of dissyllabic heavy bases (cp. § 458) from which the **-ā-** was extracted as a suffix already in the prim. Indg. period and then became used for the formation of the feminine.

With the suffixes **-o-**, **-ā-** were formed a large number of nomina actionis, nomina agentis, verbal abstract nouns, and adjectives, as *βρόμος*, *γόνος*, *δρόμος*, *λόχος*, *πλόος*, *τόκος*, *τρόμος*, *τρόπος*, *τρόχος*, *φθόρος*, *φόβος*, *φόνος*, *χόος*, and with changed meaning, as *δόμος* (Skr. *dámaḥ*) : *δέμω*, and similarly *αιθός*, *βόλος*, *γόμφος*, *λόγος*, *νόμος*, *δύκος*, *οίκος* (Skr. *vēśaḥ*, Lat. *vicus*), *πλόκος*, *ρόος*, *στρόφος*, *στοῖχος*, *τοῖχος*, *τόμος*, *τροπός*, *τρόχος*, *φόρος*.

ἀοιδός, *ἀρχός*, *κλοπός*, *πομπός*, *τροφός*; cp. Lat. *procus*: *precari*.

ἀμοιβή, *ἀοιδή*, *βαφή*, *βολή*, *γονή*, *νομή*, *πλοκή*, *πομπή*, *σκοπή*, *σπουδή*, *στέγη*, *στροφή*, *τομή*, *τροπή*, *τροφή*, *τροχή*, *φθορά*, *φορά*; *δίκη*, *μάχη*, *ρίπη*, *φυγή* (Lat. *fuga*). *βορᾶ*, *ἔρση* (Hom. *ἔέρση*), *ροή*. *γυνή* (Boeot. *βανᾶ*), *δούλη*, *κόρη*, &c.

αιθός, *βορός*, *λοιπός*, *στραβός*, *τομός*, *φορός*.

With **-o-**, **-ā-**, as secondary suffixes, were formed nouns like *ἰατρός* : *ἰατήρ*, *ῦδρος* (Skr. *udrāḥ*) : *ῦδωρ*, adj. *πῖαρός* : *πῖαρ*. *πέδον* (Skr. *padám*) : **ped-*, *foot*, *πέλεκκον* from

*πέλεκυον : πέλεκυς, ἀστρον : ἀστήρ, ἥτρον : ἥτορ. πτυχή : πτύξ, φράτρα : φράτηρ, φρίκη : φρίξ.

§ 237. -*(i)jo*, -*(i)ja*. These suffixes were chiefly used in the parent Indg. language for the formation of (1) denominative adjectives, (2) verbal adjectives, and (3) adjectives with a comparative meaning. The neuter and feminine of (1) and (2) often became used as nouns in Greek.

1. Denominative adjectives, as *īppios*, Skr. *áśvyaḥ* : *īppos*, *áśvaḥ*, horse, θεῖος : θεός, τίμιος : τιμή, and similarly ἄγριος, ἄρτιος, γομφίος, δίος (Skr. *divyāḥ*), δόχμιος, ήσυχιος, κοινός, κύκλιος, μειλίχιος, ξένιος, δύμβριος, τεσταράβοιος from *-βοյ-*os*, χελί-*oi*. θεῖον, ένύπνιον. ξενία, after the analogy of which were formed nouns like ἀγγελία, σοφία.

λιμένιος : λιμήν, δαιμόνιος : δαιμών, and similarly ἀγώνιος, αὐχένιος, ποιμένιος, χθόνιος. ἀρνίον, λιμνίον, ποίμνιον.

πάτριος, Skr. *pitr(i)yāḥ*, Lat. *patrius* : *πατήρ*, *pitár*, *pater*, σωτήριος : *σωτήρ*, and similarly αἰθέριος, ἀστέριος, ἀνακτόριος, θελκτήριος, μακάριος, φώριος. ἀνδρίον, αὔριον, θελκτήριον. ἀνακτορία, σωτηρία. From forms like θελκτήριος was extracted the suffix *-τηριο-* which became used in forming words like δατήριος, δηκτήριος, διαβατήριος, ίκετήριος ; ἀκροατήριον, δειπνητήριον.

πεξός (Skr. *padyāḥ*) from **pedjōs*, *ἡμάτιος* : *ἡμαρ* (gen. *ἡματος*), φιλοτήσιος : *φιλότητ-*, *γερούσιος* : *γέροντ-*, *έκούσιος* : *έκοντ-*, διχθάδιος : *διχθάδ*, *λητίδιος* : *λητίδ*. χερμάδιον, ὀρνίθιον, παιδίον. From forms like *ἀσπίδιον* : *ἀσπίς* (gen. *ἀσπίδος*) was extracted the suffix *-ίδιο-* which became used in forming neuter diminutives like ἀγρίδιον, ἀδελφίδιον, αἰγίδιον, ξιφίδιον, &c.

γηραιός : *γῆρας*, *ἔτειος* : *ἔτος* (gen. *ἔτεος*), αἰδίοις : *αιδώς* (gen. *αιδόος*), and similarly γεραιός, κνεφαῖος, ἐρκεῖος, ὅρειος, ἡοῖος ; after the analogy of which were formed δίκαιος, δούλειος, *ἴππειος*, χρύσειος, &c.

ἀγοραῖος : *ἀγορᾶ*, and similarly ἀναγκαῖος, ἀντιπέραιος,

πετραῖος, after the analogy of which were formed *όδαιος*, *νησταῖος*.

With *-ejo-* (= *-eo-*, Skr. *-aya-*, Lat. *-eo-*) were formed adjectives like *αἴγεος*, *ἀργύρεος*, *κύνεος*, *λίθεος*, *σιδήρεος*, *φλόγεος*, *χρύσεος*; cp. Lat. *aureus*, *igneus*, *lapideus*. *δρυεος*, *όστεον*.

With *-ew(i)jo-* were formed *ἄστεῖος* : *ἄστυ*, *γένειον* : *γέννυς*, *χέλειον* : *χέλυς*.

Att. *βασίλειος*, *χάλκειος*, Ion. *βασιλήιος*, *χαλκήιος*, from *-ηFios* older *-ηFijos*, after the analogy of which was formed Att. *πολέμειος*, Ion. *πολεμήιος* : *πόλεμος*.

2. Verbal adjectives, as *ἄγιος* (Skr. *yájyah*) : *ἄζομαι*, *πάγιος*, *στύγιος*, *σφάγιος*, *σφάγιον*. *μανία*, *πενία*.

3. With originally comparative meaning, as *ἄλλος* (§ 129, 2), Lat. *alius*, Goth. *aljis*, *other*; *μέ(σ)σος* from **μέθjos*, Skr. *mádhyah*, Lat. *medius*, Goth. *midjis*, *middle*.

4. From adverbs ending in *-i*, and from the locative in *-i*, as *ἀντίος* : *ἀντί*, *ἀρτίος* : *ἀρτί*, *πρώιος* : *πρωΐ*; *ἐνάλιος*, *ἐπιχθόνιος*, *καταχθόνιος*, *ὑποχείριος*.

§ 238. *-wo-*, *-wā-*. These suffixes were comparatively rare in the parent Indg. language, and did not become very productive in any of the separate languages. Examples are : *ἴππος* (§ 124, 2), Skr. *áśvah*, Lat. *equos*, *horse*, Att. *ծլօս*, Ion. *օնլօս* (Skr. *sárvah*) from **σολfos*, Att. *στενός*, Ion. *στεινός* from **στενfos*, *օրթօս* (Skr. *ūrdhváh*, Lat. *arduus*), Hom. *τέλειος* from **τελεσfos*, and similarly *βαλίօս*, *ծէնիօս*, *հիթեօս*, *լալօս* (Lat. *laevos*), *օլօս*, *πεլօս*, *πոլօս*, *սկալօս* (Lat. *scaevos*), *փալօս*, *փալիօս*, *կեւնօս*, Ion. *κεινօս*, *մանօս*, *մօնօս*, Ion. *մօնօս*, Att. *ξένօս*, Ion. *ξείνօս*, Att. *ծօրօս*, Ion. *օնրօս*, Att. *կօրօս*, *կօրդ*, Ion. *կօնրօս*, *կօնրդ*, Hom. *լօս*, Att. *լօս* from **Fitofos*. *ποία*.

§ 239. *-mo-*, *-mā-* were chiefly used in the formation of verbal abstract nouns, many of which became concrete in Greek, as *ἀνεμός*, *ἀρδμός*, *ἀρμός*, *ἀρπαγμός*, *θῦμός*, *θωμός*, *լույգմօս*, *կալամօս*, *կերամօս*, *կենթմօս*, *կղրսյգմօս*, *կողմօս*, *կօրմօս*,

κρῦμός, λῆμός, λοιμός, μυγμός, ὅγμος (Skr. *ájmaḥ*), *όδυρμός, οῖμος, ὄρμος, πταρμός, τόρμος, φλογμός, φορμός*. Adjectives like *δοχμός, θερμός* (Skr. *gharmáḥ, heat*, Lat. *formus*), *σῆμός*.

ἀκμή, γνώμη, θέρμη, κυήμη, λόχμη, μνήμη, δδμή, δρμή, πυγμή, σκάλμη, τιμή, φήμη, χάρμη.

Beside *-mo-, -mā-* there also occur *-dhmo-, -dhmā-*, where *-dh-* is the so-called root-determinative found in verbs like *πλήθω* (§ 475), and more rarely *-smo-, -smā-, -tmo-, -tmā-*, as *ἀρθμός, ἀριθμός, βαθμός, γενθμός, κηληθμός, κλαυθμός, κυνζηθμός, μηνιθμός, πορθμός, ρύθμος, σταθμός; εἰσίθημη, στάθμη. δασμός: δατέομαι, σχισμός; δσμή* for older *όδμή*; and with regular loss of interconsonantal *-s-* (§ 185) in *μυχμός, πλοχμός, ρώχμός; αἰχμή. ἐρετμός: ἐρέτης; ἐφετμή: ἐφέτης.*

-i-mo-, -i-mā-, where *-i-* was of various origin, was used as a secondary suffix in the formation of adjectives like *αἴσιμος, ἀλκι-μος* (Hom. loc. *ἀλκί*), *βάσιμος: βάσις, κάλλιμος, κύδιμος, λύσιμος, μόριμος, ὅβριμος, ὅψιμος, φαίδιμος, φύξιμος, χρήσιμος.*

§ 240. *-meno-, -menā-* were used in the formation of the medio-passive participles. The original forms probably were *-mēno-* (preserved in the perfect participles, as *πεπυ-σμένος, λελειμένος*), *-mono-* (preserved in Sanskrit in participles like *bódhamānaḥ*), and *-mnō-* (preserved in Greek in forms like *στάμνος, βέλεμνον, κρίμνον*; cp. Lat. *alumnus, autumnus*), see § 553.

§ 241. *-no-, -nā-* occur as primary and secondary suffixes in the formation of a large number of nouns and adjectives.

i. Primary in *ἄlinos, ἄμνος, θρόνος, θῦνος, καπνός, κύκνος, οἶνος, ὄκνος, τόρνος, ὕπνος* (Skr. *svápnaḥ*), *φρύνος, χρόνος, ὄνος; κράνον, στέρνον, τέκνον; αἴνη, ξώνη, ποινή, φερνή, φρύνη, ωνή; δάνος.*

ἄγνος (Skr. *yajñáḥ*), Hom. *ἀλαπαδνός, γυμνός, δεινός, λάγνος, λίχνος, ρύκνος, σεμνός, σμερδνός, σπαρνός, στεγνός, στυγνός.*

2. Secondary in ἑαρινός : loc. ἑαρι, ἑσπερινός, ἡμερινός, νυκτερινός, περυσινός : πέρυσι, χειμερινός, &c. φαιεινός from *φαεῖσνος : φάος, and similarly ἀλγεινός, ἐλεεινός, κελαδεινός ; σελήνη : σέλας.

§ 242. -ανο-, -ανᾶ- in nouns and adjectives, as κοίρανος, οὐρανός, βάφανος, στέφανος, χόδανος ; δρέπανον, ἔδρανον, θήγανον, κόπανον, πόπανον, σκέπανον, τύμπανον ; δρεπάνη, θηγάνη, μηχανή, στεγάνη, στεφάνη.

βάσκανος, ἐδανός, ἴκανός, δλίσθανος, πιθανός, σκεπανός, στεγανός.

§ 243. -ινο-, used in forming adjectives denoting material, origin, &c., as ἄλινος, ἀνθινος, ἀνθρώπινος, βύβλινος, γήινος, ἰχθυϊνός, κέρδινος, λάινος, πύξινος, φήγινος (Lat. *fāginus*), φλόγινος, χύτρινος.

§ 244. -ῖνο-, -ῖνᾶ-, used in forming adjectives and nouns, as ἀγχιστῖνος, γελασῖνος, ἐρυθρῖνος, κεστρῖνος, κορακῖνος, τυφλῖνος, φοξῖνος, χυτρῖνος ; cp. Skr. *navinah*, new, Lat. *dīvinus*, *equīnus*, *suīnus*.

δελφακίνη, πολυποδίνη, χοιρίνη.

§ 245. -σ-νο-, -σ-νᾶ-, used in forming nouns and adjectives, as ἀράχνη from *ἀρακονᾶ, λύχνος from *λυκσνος (§ 185), and similarly ἀχνη, πάχνη ; λάχνος, μόρφνος, συχνός, δέννος from *δετσνος.

§ 246. -συνο-, -συνᾶ-. The origin of these secondary suffixes is unknown. They were used in forming adjectives the feminine of which became used as abstract nouns, as γηθόσυνος, δουλόσυνος, θάρσυνος from *θαρσο-συνος, πίσυνος from *πισο-συνος ; δικαιοσύνη, δουλοσύνη, κλεπτοσύνη, μημοσύνη, σωφροσύνη ; after the analogy of these were formed κερδοσύνη : κέρδος (neut.), μαντοσύνη : μάντις, &c.

§ 247. -ιο-, -ιᾶ-, used both as primary and secondary suffixes, especially the latter, in the formation of nouns and adjectives.

1. Primary, as βηλός, γαῦλος, γαυλός, καυλός, στῦλος, τύλος ; ξύλον, σκῦλον, φῦλον, πέταλον ; ζεύγλη, θηλή,

όμιχλη, στρέβλη, τύλη, φῦλή, ἄελλα from *ἀφελγα : ἀημι, κεφαλή.

δειλός, ἔκπαγλος, στρεβλός, τυφλός, πέταλος.

2. Secondary, as ἄγγελος, κάπηλος ; δείκελον ; ἀγέλη, θυμέλη, νεφέλη, πιμελή, ἀγκύλη, εύχωλη, παυσωλή, τερπωλή, φειδωλή.

όμαλός, πίαλος, χθαμαλός, ἀ(γ)είδελος, δεελός, στυφελός, ἀγκύλος, δριμύλος, ἡδύλος, παχυλός, ἀπατηλός, στηγηλός, καταρηγηλός, μῖμηλός, στροβιλός, φειδωλός. From forms like ἡδύλος, παχυλός with diminutive meaning was extracted the suffix -υλο- which became extended to forms like ἀρκτύλος : ἀρκτος, μικκύλος : μικκός, and similarly with the extensions -υλλο-, -υλλιο-, -υλλιδ-, υλλιδιο-, as καθάρυλλος : καθαρός, ἀνθύλλιον : ἀνθος, ἐπύλλιον : ἔπος, ἀκανθύλλις (-ίδος) : ἀκανθίς (-ίδος), μειρακυλλίδιον : μειράκιον. πίαλεος from *πίαλεφος : πίαλος, and similarly αίμαλέος, ἵκμαλέος, κρῦμαλέος, from which -αλέος was extracted as a suffix and extended to forms like διψαλέος : δίψος, ὑπναλέος, ψευδαλέος.

§ 248. -ro-, -rā-, used both as primary and secondary suffixes in the formation of nouns and adjectives.

1. Primary, as ἀγρός (Skr. एर्गः, Lat. ager, Goth. akrs), ἀφρός, βόθρος, κάπρος (Lat. caper), κλῆρος, νεκρός, νεφρός, δόμπρος, τάλαρος, ταῦρος (Lat. taurus), χίμαρος ; δῶρον, πλευρόν ; ἔδρα, τάφρη, χώρα.

ἄκρος, ἐρυθρός (Skr. रुद्धिराहि, Lat. ruber), λαμπρός, λεπρός, λυπρός, μακρός, μικρός (σμικρός), μῶρος, πικρός, σαπρός, σινδρός, σκληρός, τρηρός, φαιδρός, χῆρος, χλωρός, χοῖρος, ψυδρός, ψωρός ; βριαρός, γεραρός, ιαρός, λιπαρός, πιαρός, ὑδαρός.

2. Secondary, as πενθερός, πτερόν, ἀργυρος, ζέφυρος, μάρτυρος.

βλαβερός, δροσερός, ἐλεύθερος, θαλερός, κρατερός, ξερός, στυγερός, σχερός, φοβερός, γλαφυρός, ἔχυρός, καπυρός, κινυρός, λιγυρός, μωλυρός, ψιθυρός, ἀνιπρός, ἀσηρός, ὀδυνηρός, ὀκυηρός, ὀλισθηρός, πονηρός, ισχυρός, ὀϊξυρός.

§ 249. The suffixes **-bho-**, **-bhā-** became productive in Greek, especially in the formation of the names of animals, as ἀσκάλαφος, ἔλαφος, ἔριφος, κιδάφη, κίδαφος, κίραφος, κόραφος, κόσσυφος, Att. κόττυφος, σέρφος. ἀλφός, ἔδαφος, κέραφος, κόλαφος, κορυφή, κρόταφος, φλήναφος. ἄργυφος, στέριφος. From the nouns in **-afos** was formed the diminutive suffix **-áphiou**, as in θηράφιον, ξυλάφιον, ξυράφιον.

§ 250. **-dhlo-**, **-dhlā-**. The origin of these suffixes is unknown. Examples are: γένεθλον, ἔδεθλον, θέμεθλον, θύσθλον; γενέθλη, ιμάσθλη; ἐσθλός.

§ 251. **-dhro-**, **-dhrā-**, used in forming nouns and adjectives, as μυλωθρός, ὅλεθρος; ἄρθρον, βάθρον, βάραθρον, κήληθρον, κόρηθρον, μέλπηθρον, πέλεθρον, πλέθρον, ρεῖθρον, τέρθρον; κοιμήθρα, κρεμάθρα.

βλωθρός, λάληθρος, σκεθρός, σκυθρός.

§ 252. **-ko-**, **-kā-**, or **-qo-**, **-qā-**. These secondary suffixes were common in all the languages, especially in the forms **-iko-**, **-ikā-** which started out from i-stems (*μαντικός* : *μάντις*) and then became extended to other kinds of stems, as ἀγωνικός, ἀνδρικός, ἀστικός, ἔθνικός, θηλυκός, ἵππικός, κριτικός, μαθητικός, μερικός, νυμφικός, πηλίκος, τηλίκος, τιμητικός, φυσικός; cp. Lat. *modicus*. ἱέρακος, πίθηκος, Dor. πίθāκος; πρόκα : πρό; θήκη.

In derivatives of jo-formations we have **-iakos**, as *καρδιακός*, *κύριακός*, *πλουσιακός*, *σκιακός*.

§ 253. **-sko-**, **-skā-** are related to the presents in **-sko-** (§ 469), as in ἄρεσκος : ἀρέσκω, βοσκή : βόσκω, δίσκος from *δικσκος (§ 186).

It is doubtful whether the **-sk-** in **-isko-**, **-iskā-** is of the same origin. These suffixes became productive, especially in the formation of diminutives, as ἀνθρωπίσκος, δεσποτίσκος, νεανίσκος, οἰκίσκος, παιδίσκος, χοιρίσκος; ἀσπιδίσκη, οἰκίσκη, παιδίσκη, ὑδρίσκη.

§ 254. **-tero-**, **-terā-** were common suffixes in the forma-

tion of comparatives from adjectives, adverbs, nouns and pronouns, as *κουφότερος*, *σοφότερος*, *γλυκύτερος*, *ἀληθέστερος*, *χαριέστερος*, *γεραίτερος*, *μεσαίτερος*, *πεπαιάτερος*, *σχολαίτερος*, *δεξιτερός*, see § 376. *ἀνώτερος*, *ἀφάρτερος*, *πρότερος*, *ὑπέρτερος*, *παλαίτερος*, *ὑψίτερος*. *ἀγρότερος*, *βασιλεύτερος*, *δημότερος*, *θηλύτερος*, *κύντερος*, *ὅρεστερος*, *ἥμέτερος*, *ὑμέτερος* (see § 408), *ἴτερος*, Dor. *ἄτερος*.

§ 255. *-tewō-*, *-tewā-*, used in the formation of verbal adjectives, as *γραπτέος*, *δοτέος*, *δραστέος*, *λειπτέος*, *λυτέος*, *τιμητέος*, see § 556.

§ 256. *-tlo-*, *-tlā-* which are of doubtful origin, as in *ἄντλος*; *σεῦτλον*, *χύτλον*; *ἐχέτλη*.

§ 257. *-tro-*, *-tlā-*, used especially in the formation of neuter nouns denoting an implement, as *ἄροτρον* (Lat. *arātrum*), *βάκτρον*, *δέλετρον*, *ἔλυτρον*, *ζῶστρον*, *κέντρον*, *λέκτρον*, *λουτρόν*, *μέτρον*, *μήνυτρον*, *νίπτρον*, *πλῆκτρον*, *στέγαστρον*, *τέρετρον*, *φέρετρον* (*φέρτρον*).

§ 258. *-to-*, *-tā-*. These suffixes were chiefly used in the parent Indg. language in the formation of verbal adjectives, and of ordinal numerals.

i. The verbal adjectives had originally the accent on the suffix and the base had accordingly the weak grade of ablaut, but in Greek as in other languages the verbal adjective was sometimes formed direct from the present with the strong grade of ablaut, as *ἄ-ιστος*, *ἄ-κριτος*, *ἄ-νυπτος*, *ἄ-πιστος*, *βατός* (Skr. *gatāḥ*, Lat. *in-ventus*), *δρατός* (*δαρτός*) : *δέρω*, *κλυτός* (Skr. *śrutāḥ*, Lat. *in-clutus*), *πεπτός* (Lat. *coctus*), *ρύτός* (Skr. *srutāḥ*), *σχετός* : *σχεῖν*, *τατός* (Lat. *tentus*), *φατός*, *φθιτός*, *ἀ-δάματος*, *ἄ-κρατος*, *βρωτός*, *γνωτός* (Skr. *jñātāḥ*, Lat. *nōtus*), *δοτός* (Lat. *datus*), *έλατός*, *ἐμετός* (Lat. *vomitus*), *θετός* (Skr. *hitāḥ*), *θητός*, *κμητός*, *στατός* (Skr. *sthitāḥ*, Lat. *status*), *στρωτός*; *ζευκτός* beside Skr. *yuktāḥ*, and similarly *γευστός*, *φερτός*, *φευκτός*, *πηκτός*. See § 555.

The masculine, feminine and rarely the neuter of the

verbal adjectives often came to be used as abstract nouns (sometimes with concrete meaning) in Greek as also in other languages, as ἀμητος, βίοτος, βλαστός, ἔμετος, θάνατος, κάματος, νιφετός, νόστος, οἶτος, παγετός, πλοῦτος, φόρτος, χόρτος. ἀήτη, ἀκτή, ἀρετή, ἀυτή, βιοτή, βλάστη, βροντή, γενετή, ἐν-ετή, κοίτη, μελέτη, πινυτή, σπάρτη, τελευτή. σπάρτον, φυτόν.

The feminine abstract nouns, which came to denote persons, became masculine and then took -s in the nominative and formed their gen. singular after the analogy of the o-declension (§ 323), and similarly with the denominatives in -tā-, as γενέτης, δέκτης, δεσμάτης, κλέπτης, κοσμητής, κριτής, μαθητής, οἰκέτης, ποιητής, ὑφάντης, προφήτης, ψάλτης; ἀγρότης, ἀσπιστής, δεσπότης, δημότης, ἰδιώτης, ἵπποτης, κορυστής, πολυβούτης, στρατιώτης, τελεστής, τοξότης, φῦλέτης. After the analogy of ὄφίτης : ὄφις, πολίτης : πόλις were formed ὁδίτης : ὁδός, ὁπλίτης : ὅπλον, τεχνίτης : τέχνη.

2. In ordinals, as τρίτος, τέταρτος (Lat. quartus), πέμπτος (Lat. quintus, Lith. peñktas), ἕκτος (Lat. sextus, Goth. saíhsta), δέκατος, είκοστος, &c. See §§ 389–93.

On the superlative ending -tato-, as in ἀληθέστατος, βέλτατος, κουφότατος, μελάντατος, ὁξύτατος, σοφώτατος, φέρτατος, φίλτατος, &c., see § 377, 4.

§ 259. -is-to-, -istā-. (Skr. -iṣṭha-, Goth. -ista-), used in the formation of the superlative of adjectives, as in αἰσχιστος, ἄριστος, βέλτιστος, ἐλάχιστος, ἔχθιστος, ἥδιστος, κάλλιστος, κράτιστος, κύδιστος, μέγιστος, ὀλίγιστος, πάχιστος, πλεῖστος, πρώτιστος, τάχιστος, φέριστος, χείριστος. See § 377, 2.

§ 260. -i-. This suffix is probably identical in origin with the -i- which occurs in the second syllable of disyllabic heavy bases (cp. § 481). In Greek it is fairly common in nouns but rare in adjectives, as ἄρδις, δῆρις : δέρω, ἔρις, μῆνις, ὅις, οἶς (Skr. ávih, Lat. ovis, Lith. avis),

δρχις, ὁφις (Skr. áhiḥ), πόλις, πόρις, στρόφις : στροφέω, τρόπις, τρόχις; τρόφις. On the various grades of ablaut which originally occurred in the different cases see § 328. The oblique cases of some i-stems were often formed after the analogy of stems in -*θ-* (§ 343), cp. ἔρις (Skr. áriḥ, enemiy), acc. ἔριν beside gen. ἔριδος, &c., μῆνις, τρόπις, gen. μῆνιδος, τρόπιδος.

§ 261. The suffixes *-mi-*, *-ni-*, *-ri-* were very rare in Greek as also in most of the other Indg. languages, as ἔλμις, worm, θέμις (gen. θέμιτος, θέμιδος after the analogy of stems ending in a dental), φῆμις; εὐνίς; ἄκρις, ὅκρις (Skr. áśriḥ, Lat. ocris); ἴδρις.

§ 262. The suffix *-ti-* became productive in all the Indg. languages in the formation of primary verbal abstract nouns of the feminine gender. The root-syllable had originally the weak grade of ablaut, as βάσις (Skr. gátiḥ), κλίσις, κτίσις, πίστις, πλύσις, πύστις, ρύσις (Skr. srutíḥ), σχέσις, σχίσις, τάσις, τίσις, φθίσις, χύσις; δέσις, δόσις, θέσις, στάσις (Skr. sthítih), φάσις; ἀησις, βρῶσις, γένεσις, γνῶσις (Skr. jñātih), ἔμεσις, κρέμασις, ὄνησις, τάραξις, φράσις, φύσις. Forms with the strong grade of ablaut in the root-syllable were new formations, as ἄμ-πωτις, δεῖξις (cp. Skr. diṣṭih), ἔκ-λειψις, ζεῦξις (Skr. yuktih), λῆξις, πῆξις, φεῦσις beside ρύσις, τέρψις, φεῦξις. ἀξίωσις, κόσμησις, ὄρασις, φόρησις. The masculine μάντις was also originally a feminine abstract noun. See § 169.

§ 263. *-i-* (but *-ij-* before vowels, cp. Skr. nadīḥ, river, gen. nadīyah̄, &c.), used in forming feminine nouns and adjectives. The nouns and adjectives containing this suffix mostly came to be inflected after the analogy of dental-stems already in prim. Greek (§§ 330, 343), cp. Hom. ἡνῖς (acc. ἡνῖν), κνημῖς, gen. κνημῖδος, and similarly βλοσυρώπις, εὐπλοκαμῖς.

§ 264. *-u-*. This suffix was used in the formation of nouns and adjectives, especially the latter, as βαθύς, βαρύς (Skr.

gurúḥ, Goth. kaúrus), βραδύς, βραχύς, γλυκύς, ἐλαχύς, εὐρύς, ἡδύς (Skr. svādūḥ), θρασύς, κρατύς, λιγύς, παχύς (Skr. bahúḥ), πλατύς, πολύς (Skr. purúḥ), ταρφύς, τραχύς, ὥκύς (Skr. aśúḥ). πῆχυς (Skr. bāhúḥ), ἄρκυς, γένυς (Skr. hánuh, Goth. kinnus), γῆρυς, στάχυς; γλάφυ, γόνυ (Skr. jānu), δόρυ (Skr. dāru), μέθυ (Skr. mādhu), πῶ. See § 343. On the various grades of ablaut which originally occurred in the different cases see § 331.

§ 265. The suffixes *-lu-*, *-nu-*, *-ru-* were very rare in Greek as also in the other Indg. languages, as θῆλυς (Skr. dhārūḥ); λιγνύς, Hom. θρῆνυς; βότρυς, δάκρυ (Lat. lacru-ma).

§ 266. *-tu-*, especially used in the formation of verbal abstract nouns which are feminine in Greek, but masculine in Latin and mostly also in Aryan and the Germanic languages, as ἀκοντιστύς, ἀλαωτύς, ἀπ-εστύς : ἔστι, ἀρπακτύς, ἀρτύς (Lat. artus), ἀσπαστύς, βοητύς, βρωτύς, γραπτύς, δαιτύς, ἐδητύς, ἵτυς (Lat. vitus), κλειτύς (κλῖτύς), ὁρχηστύς, πίτυς (Skr. pitūḥ), ποθητύς, ρυστακτύς, φραστύς, χαλεπτύς. This type of noun became very productive in Ionic. The same suffix also occurs in the neuter nouns ἀστυ (Skr. vástu, place), φῖτυ, and in feminine numerals like τριτύς, τετρακτύς, πεντηκοστύς, ἑκατοστύς, χιλιοστύς.

§ 267. *-ū-* (but *-uw-* before vowels, cp. Skr. tanūḥ, body, gen. tanūvah), used in forming feminine nouns, as ἰλύς, ἴσχύς, ὀσφύς, ὀφρῦς, πληθύς, χέλυς. The nouns belonging to this type preserved their original inflexion (§ 334) in Greek, Aryan and the Baltic-Slavonic languages, but in the other languages they went over into the ū-declension.

§ 268. Prim. Greek *-ēu-* (but *-ēw-* before vowels) occurs almost exclusively in the formation of nomina agentis, as βασιλεύς, γονεύς, γραφεύς, ἡνιοχεύς, ἱερεύς, ἵππεύς, νομεύς, πομπεύς, τοκεύς, φονεύς, φορεύς. For the inflexion of nouns belonging to this type see § 334. The origin of the *-ēu-*, which is not found in the other Indg. languages, has

never been satisfactorily explained. According to Brugmann, *Griech. Grammatik* (§ 182) it probably started out from verbal adjectives in *-η-f(o)-* to verbs in *-έω*, as **φορητ(o)s* (cp. *φορητός*) : *φορέω* which would regularly become *φορεύς* (§ 63).

3. SUFFIXES ENDING IN A CONSONANT.

§ 269. *-en-* with the various ablaut-grades *-en-*, *-on-*, *-ēn-*, *-ōn-*, *-n-* but *-ŋ-* before consonants, see § 345. This suffix had various functions. It was especially used in the formation of nouns denoting (1) animate objects, as *ἀργάνων*, *γείτων, κύων* (Skr. *śván-*), *στίγων, τέκτων* (Skr. *tákṣan-*), *τρυγάνων, ἀρήν, ἄρσην* (*ἄρρην, Ion. ἔρσην*); *αἴθων, γάστρων, γνάθων, δρόμων, κύφων, στράβων, τρίβων, τρήρων, ψυθών*; *οὐρανίων* : *οὐράνιος*, from this and similar forms the *-ίων* was extracted and extended to o-stems, as *δειλακρίων* : *δειλακρος, μαλακίων* : *μαλακός*. (2) Parts of the body, as *ἀγκών, βουβών, πυγών, φαγών, ἀδήν, αὐχήν, σπλήν, φρήν*.

The origin of the formation of the nouns in *-ών* (Ion. *-εών*) denoting a place is unknown, as *ἄνδρών, δαφνών, ιππών, λασιών, παρθενών* (*παρθενεών*).

§ 270. *-(i)jen-* with the various ablaut-grades *-(i)jen-*, *-(i)jon-, -(i)jēn-, -(i)jōn-, -in-, -īn-*, the *-īn-* of which became generalized in Greek, see § 348. This suffix only occurs in the formation of a small number of nouns, as *ἄκτην-, γλωχῖν-, δελφῖν-, ὠδῖν-*.

§ 271. The suffix *-wen-* with the same ablaut-grades as *-en-* was rare in Greek, as *πίων* (Skr. *pívan-*), *ἀ-πείρων* from **ἀπερφων*; *δελέατ-* from **δελεφατ-* : *δέλεαρ, Hom. εἴδατ-* : *εἴδαρ, ὁνείατ-* : *ὄνειαρ, πείρατ-* : *πεῖραρ*, see § 371. Infinitive Cypr. *δοғεναι*, Att. *δοῦναι* (§ 546).

§ 272. *-d-en-* with the same ablaut-grades as *-en-* occurs in the formation of nouns from verbal stems, as *ἀλγηδών, ἀχθηδών, κλεηδών, μεληδών (μελεδών), πεμφρη-*

δών, πρηδών, σηπεδών, σπαδών, σχαδών, τηκεδών, τῦφεδών, χαιρηδών, cp. formations like Lat. *frigēdo*, *rubēdo*.

§ 273. *-men-* with the various ablaut-grades *-men-*, *-mon-*, *-mēn*, *-mōn*, *-mn-* but *-m̥-* before consonants (§ 845) and *-m̥-* in the nominative and accusative singular of neuter nouns (§ 350). This suffix was used partly in the formation of nomina actionis (masculine and neuter) which often came to be used for the names of objects, and partly in the formation of nomina agentis and adjectives, as ἄκμων (Skr. *áśman-*), ἀλήμων, γνῶμων, ἡγεμών, θημών, κευθμών, κηδεμών, λειμών, στήμων, τελαμών, τέρμων (Lat. *termo*), χειμών, λιμήν, ποιμήν, πυθμήν, ὑμήν; used as a secondary suffix in ἀκρεμών : ἀκρος, δαιτυμών : δαιτύς. Adjectives like ἀλήμων, ἐλεήμων, εὐ-είμων, εὐ-θήμων, ἕδμων, τλήμων. Neuters, as *εῖμα* (Skr. *vásma*, *cover*), *νῆμα* (Lat. *nēmen*), *ὄνομα* (Skr. *nāma*, Lat. *nōmen*, Goth. *namō*), *στρῶμα* (Lat. *strāmen*), and similarly ἀνά-θημα, βῆμα, βλῆμα, γνῶμα, δεῖμα, δέρμα, ἐπί-στημα, ἔρμα, ζεῦγμα, ἥμα, λεῖμα, μίσθωμα, μνῆμα, νεῦμα, νόημα, δρᾶμα, δρεγμα, πνεῦμα, πῶμα, ρένμα, σέλμα, σῆμα, στέμμα, σχῆμα, τέρμα, ὑπό-δημα, φέρμα, φλέγμα, φῦμα, χεῖμα, χεῦμα, χρῆμα. For the inflexion of these nouns see § 350.

The suffix *-men-* also occurs in the Lesbian and Homeric infinitives (dative) like *īdμenai* (Vedic *vidmánē*), *δόμεναι* (Vedic *dámanē*), *ἔδμεναι*, *γνώμεναι*, *θέμεναι*, *φανήμεναι*, *ζευγνύμεναι*, *ἐστάμεναι*, *τετλάμεναι*, &c., see § 548; and also in infinitives (endingless locative) like *īdμen*, *τιθέμεν*, *θέμεν*, *δόμεν*, *ἐστάμεν*, *δρινύμεν*, &c., see § 549.

§ 274. *-t-*, *-dh-*, *-s-* (of various origin) + *-men-*, as in ἀϋτμήν, λαῖτμα ; *īθμα* ; *πλάσμα* : *πλάσσω*, *ἔρεισμα* : *ἔρειδω*, *ἀσπασμα* : *ἀσπάζομαι*, *νόμισμα* : *νομίζω*, *κλώσμα* : *κλώθω*, *ἐπι-λήσμων* : *ἐπι-λήθω*.

§ 275. *-nt-* with the various ablaut-grades *-ént-*, *-ont-*, *-nt-*, *-ṇt-*. With this suffix were formed the masculine and neuter of all active participles except the perfect. For the

history of the various ablaut-grades in Greek and for the inflexion of the participles see §§ 352–5. Here belong also a number of verbal nomina which became nominal in Greek and a few pure nominal forms, as ἄρχων, γέρων, δράκων, ἔκών, κρείων, μέδων, μέλλων, ὁρίζων, φαέθων, πᾶς, ὁδούς (Skr. dánt-, dat., Lat. dēns, dentis).

§ 276. -went- (= -fēvτ-, Skr. -vant-), weak grade -wṇt- (-fēt- with -e- for -a- through the influence of -fēvτ-, Skr. -vat-), see § 356. This suffix was used in Greek and Sanskrit in the formation of denominative adjectives denoting *possessing, endowed with*, as ὀπόεις, *jucy* = Skr. ápavant-, *watery, dolorous, ḡnemóeis, oīnóeis, stonóeis, χaríeis*; from forms like *στονόfεντ- : στόνος the -ofεντ- was extracted and extended to other kinds of stems, as σκιόεις, μητίoeis, iχθυόeis, νιφόeis, κλωμακόeis, θερόeis, κερόeis, αίματόeis; αίγλήeis, λαχνήeis, τιμήeis; from forms like *τιμάfεντ- : τιμά the -āfεντ- was extracted and extended to other kinds of stems, as μεσήeis, φοινήeis, δενδρήeis, οίστρήeis, τελήeis.

§ 277. -er- with the ablaut-grades -er-, -or-, -ēr, -ōr, -r- but ē before consonants, see § 359. In Greek this suffix only occurs in a few nouns, as ὀᾶήρ (Skr. dēvár-), ἀνήρ, ἄῆρ, αιθήρ.

§ 278. -ter- with the various ablaut-grades -ter-, -tor-, -tēr, -tōr, -tr- but -t̄r- before consonants, see §§ 359–61. This suffix was especially used in the formation of names of relationship and nomina agentis, as πατήρ (Skr. pitár-, Lat. pater, Goth. fadar), μήτηρ (Skr. mātár-, Lat. māter, OE. mōdor), θυγάτηρ (Skr. duhitár-, Goth. daúhtar), φράτηρ, φράτωρ, *member of a φrātrīā* (Skr. bhrātar-, Lat. frāter, Goth. brōþar, brother), εύ-πάτωρ, παμ-μήτωρ, ἄκτωρ (Lat. actor), ἀφ-ήτωρ, βάτωρ, γενέτωρ (Skr. janitár-, Lat. genitor), δώτωρ (Skr. dātár-, Lat. dator), ἐπι-βῆτωρ, θηράτωρ, ἵστωρ, καλήτωρ, κτίστωρ, μῆστωρ, παν-δαμάτωρ (Skr. damitár-), βήτωρ, σημάντωρ, ἀλεξητήρ, ἀροτήρ (Lat. arātor), αὐλητήρ, γενετήρ, δημητήρ, δοτήρ, δωτήρ, ἐλατήρ,

ἐπ-ακτήρ, ζευκτήρ (Skr. yōktár-), θηρατήρ, ὀλετήρ, οινοποτήρ (Skr. pātár-, Lat. pōtor, *drinker*), φυλακτήρ. ἀστήρ, γαστήρ.

§ 279. -es- with the ablaut-grades -es-, -os-, -ēs (§ 366), -ōs (§ 368). This suffix was used in the formation of neuter nouns (mostly abstract), see § 364, and compound adjectives related to such nouns, see § 366, as well as in the formation of a few masculine and feminine nouns, see § 368. (a) Neuter nouns, as γένος (Skr. jánas-, Lat. genus), κλέος (Skr. śrávas-), μένος (Skr. mánas-), νέμος (Lat. nemus), ρῆγος (Lat. frīgus), and similarly ἄγκος, ἄγος, αἴθος, ἄκος, ἄνθος, ἄχος, βάθος, βέλος, βένθος, δάκος, δέος, ἔδος, εἶδος, ἐλεγχος, ἔλκος, ἔλος, ἔπος, ἔρεβος, ἔρκος, ἔτος, εῦρος, ζεῦγος, θέρος, θράσος (θάρσος), κῆδος, κράτος (κάρτος), κῦδος, λέχος, λῆθος, λίπος, μῆκος, νέφος, πάχος, πέκος, πένθος, πλάτος, πύος, σάκος, σθένος, σκέλος, στέγος (τέγος), στέρφος (τέρφος), τάφος, τάχος, τεῖχος, τέκος, ψεῦδος. (b) Compound adjectives, as ἀ-κλεής, ἀ-ληθής, ἀν-αιδής, ἀ-σθενής, αὐτο-φυής, ἀ-ψευδής, δυσ-κλεής, ἀ-μενής, δυσ-μενής (Skr. dur-manāḥ), εὐ-μενής, εὐ-γενής, and the back-formations ἐλεγχής, φραδής, ψευδής, see § 366. (c) Masculine and feminine nouns, as γέλως, ἔρως, ἰδρώς, αἰδώς, Hom. ἡώς, Att. ἔως, see § 368. This type of noun became productive in Latin, cp. O.Lat. arbōs, honōs, &c.

§ 280. -n-es-, -w-es-, -dh-es-, as in the neuter nouns γλῆνος, δάνος, ἔθνος, ἔρνος, ἵχνος, σμῆνος; Hom. εῖρος from *érfos, πῖ(F)os (Skr. pívas-), στεῖνος from *στενfos, φᾶρος, Att. φάρος from *φαρfos; βρῖθος, μέγεθος, πλῆθος, στῆθος.

§ 281. -jes- with the ablaut-grades -jes-, -jos-, -jōs, -is-, and -i-jes-, -i-jōs-, used in the formation of the comparative of adjectives. This mode of forming the comparative was only preserved in Greek in the accusative singular masculine and feminine, the nominative plural masculine and feminine, and the nominative and accusative of the neuter plural

(§ 369). For the formation of the comparative in Greek see §§ 375–6.

§ 282. **-wes-** with the ablaut-grades **-wes-**, **-wos-**, **-wōs-**, **-us-**, and **-wet-**, **-wot-**, used in Greek, Aryan and the Baltic-Slavonic languages in the formation of the perfect active participle, see § 552.

§ 283. **-es-** (=Gr. **-as-**, Skr. **-iś-**), the **-e** of which probably belonged originally to the second syllable of dissyllabic heavy bases with the accent on the first syllable. The **-es-** is the weak grade of the **-ōs** in paragraph 279, and became generalized already in the parent Indg. language. It occurs in a considerable number of neuter nouns, as *βρέτας*, *γέρας*, *γῆρας*, *δέμας*, *δέπας*, *κέρας*, *κρέας* (Skr. *kravīś-*, raw flesh), *οὖδας*, *πέρας*, *σέλας*, *σκέπας*, *τέρας*, &c. For the inflexion of these nouns see § 370.

§ 284. **-tāt-** (Skr. and Lat. **-tāt-**), used in the formation of feminine abstract nouns from adjectives, as *νεότης*, Lat. *novitās* : *νέος*, *novos*; *δλότης*, Skr. *sarvātāt-* : *δλος*, *sárvah*, and similarly *ἀπλότης*, *ἰσότης*, *κακότης*, *ὅρθότης*, *σκαιότης*, *φιλότης*, *βαρύτης*, *βραδυτής*, *γλυκύτης*, *παχύτης*, *ταχυτής*. From forms like **νεφοτάτ-* the **-otāt-** (cp. § 51) was extracted as a suffix and extended to consonantal stems *ἐνότης*, *μελανότης*, *παντότης*, *χαριενότης*. See § 343.

§ 285. In a considerable number of nouns and adjectives the suffix seems to consist of a simple explosive (**t**, **k** (=Indg. **k** and **q**), **d**, **g**) which in some cases at least was the weak grade form of an explosive + **-o-** or **-ā-**, cp. *ἀγνώσ* : *ἀγνωτος*, Lat. *i-gnō-tus*; *γυμνήσ* : *γυμνήτης*; *μείραξ* : Skr. *maryakā-h*, *manikin*; &c.

-t-. It occurs especially in the formation of compound verbal adjectives and in masculine nouns, as *ἀγνώσ*, *ἀδμήσ*, *δορι-κμήσ*, *προ-βλήσ*, *ώμο-βρώσ*; *γυμνήσ*, *θήσ*, *κέλησ*, *λέβησ*, *πένησ*, *χέρνησ*, *πλώσ*, *ἄναξ*; *νύξ*. It occurs as a secondary suffix in *θέμις*, *χάρις*; *γάλα* (*γάλακτος*), *μέλι* (*μέλιτος*).

-k-. It occurs in the formation of nouns, as *ἀλώπηξ*,

δέλφαξ, Ion. θώρηξ, ἴβυξ, κόραξ, λεῖμαξ, μεῖραξ, ψήληξ; βέμβιξ, πέρδιξ, cp. Lat. *cornix*, *rādīx*, &c.

-d.. It occurs especially in the formation of nouns and adjectives in -άς, gen. -άδος, and in nouns in -ις, gen. -ιδος, as γενειάς, δρομάς, κεμάς, λαμπάς, νιφάς, πελειάς; μιγάς, νομάς, τεφράς, τοκάς, φυγάς; ἀσπίς, γλυφίς, δαις, ἐπιγονίς, ἔρις (acc. ἔριν), κάλπις (acc. κάλπιν), κληΐς, ληΐς, ὅπις, cp. Lat. *lapis*, gen. *lapidis*; ἐμύς, πηλαμύς.

-g.. It occurs especially in the combination -γγ- in diminutives and in nouns denoting a hollow or a musical instrument, as κύστιγξ, λᾶγγξ, λάρυγξ, ραθάμιγξ, σάλπιγξ, σῆραγξ, σπῆλυγξ, στόρθυγξ, σῦριγξ, φάλαγξ, φάραγξ, φάρυγξ (gen. φάρυγος), φόρμιγξ, ψάλτιγξ. κόκκυξ, λάταξ, μάστιξ, πέμφιξ, πτέρυξ, τέττιξ.

§ 286. For the formation and inflexion of nouns belonging to the r- : n-declension see § 371.

4. THE FORMATION OF COMPOUND NOUNS AND ADJECTIVES.

§ 287. Most of the Greek compound nouns and adjectives consist of the compounding of two words each of which had an independent existence in the historic period of the language. The number of compounds, in which the first or last member or both members did not exist as independent words, was comparatively small, as in compounds like ἀ-θεος, ἀν-όμοιος where ἀ-, ἀν- (= Indg. *ŋ-*, Skr. a., an-, Lat. in., English *un-*) is the weak grade of the prim. Indg. negative particle *ne, not; ἀ-παξ, ἀ-πλόος where ἀ-=Skr. sa-, Indg. *sm- the weak grade of *sem, one; δά-πεδον where δα- = Indg. *dm- the weak grade of δομ- in δόμος; ἑκατόμ-βη : βοῦς; νεο-χμός : χθών; ἔν-δον with -δον from *-δομ in δόμος; πέρ-νοι where the -νσ- in -νσ-ι from older -ντ-ι is the weak grade of fétos; τρά-πεζα where τρα- is the weak grade of τετρα-, four, and -πεζα from *πεδja : πούς; ἄριστον from *άγερι, in the morning, and *-στον from

*-δτον, the participle to ἔδω; Ion. σήμερον, Att. τήμερον from *κήσμερον (§ 129, 7) : *κιο-, this, and ἡμέρα.

§ 288. The compounds may be conveniently divided into four classes. In Class I the first member was the stem of a declinable noun, adjective or pronoun, or an indeclinable numeral. In Class II the first member was an indeclinable particle which only occurred in compounds already in the parent Indg. language. In Class III the first member was an original adverb which also existed as an independent word. In Class IV the first member was a case-form or a form which came to be used as an adverb in Greek.

CLASS I.

§ 289. To this class belongs a very large number of compound nouns and adjectives. In such compounds the first member consists merely of the stem. This mode of forming compounds goes back to the prim. Indg. period and arose before the so-called case-endings came into existence. Regular forms were: ἀκρό-πολις, αὐτό-ματος, λογο-γράφος, ιππο-μαχίᾳ, ιππο-πόταμος, μονο-γενής, ταυρο-φόνος; ἄγγελια-φόρος, βουλη-φόρος, μοιρη-γενής; μαντι-πόλος, πτολή-πορθος, τρί-πους; ἀστυ-νόμος, ἥδυ-(F)επής, πολυ-ανθής, ὠκυ-πέτης; σύ-αγρος; βου-νόμος, βού-παις, ναύ-αρχος, ναυ-πηγός, ναυ-κράτης; ἀρρεν-ωπός, τεκτόν-αρχος, κυν-ώπις, ὄνομά-κλυτος, πάντ-αρχος; ἀνδρ-αχθής, πατρ-άδελφος; νυκτ-αίετος, ὄρνιθ-αρχος, ποδ-άρκης, πυγ-μάχος; ἐπεσ-βόλος, σακεσ-φόρος, κερασ-βόλος, σελασ-φόρος, μῆσ-φόνος, ἑωσ-φόρος. After the analogy of the ο-stems the -ο- became extended to all kinds of stems, as ἡμερο-δρόμος, Νικό-μαχος, ὑπο-τόμος, ψῦχο-πομπός; φυσιο-λόγος; ἵχθυο-φάγος, συο-κτόνος; βο-ό-κλεψ; ἀγωνο-θέτης, ἀκμό-θετον, ἀρρενό-παις, κυνο-κέφαλος, φρενο-μανής, αἰμο-βαφής, σωματο-ειδής, παντό-σεμνος; αἱθρό-τοκος, ἀνδρο-φάγος, ἀστερο-ειδής, πατρο-φόνος, ρήτορο-διδάσκαλος; αἴγο-βοτος, ἀσπιδο-πηγός, νιφό-βολος, ὅρνιθο-σκόπος, παιδο-φόνος;

ἐπο-ποιός, είρο-κόμος. The -ā-, -η- of the ā-stems was often extended analogically to other stems, especially for metrical purposes in poetry, as ἀκρά-χολος, θανατη-φόρος, νεᾶ-γενής; βο-η-νόμος; ἀσπιδη-φόρος, &c. Regular forms were τετράπους, ἑπτά-πους, δεκά-πους, after the analogy of which were formed πεντά-πους, ἔξι-πους, &c. Regularly contracted forms were Dor. στραταγός, κρατερώνυξ, φιλήρετμος, ὡμηστής, &c., after the analogy of which were formed κυν-ἄγος, αἰγ-ῶνυξ, πολυ-ωφελής, βο-ηλασία, παν-ήγυρις, &c.

The adjectives in -po- have -i- in compounds, as ἀργικέραυνος : ἀργός from *ἀργυρος, κῦδι-άνειρα : κῦδρός, λαθικῆδης : λάθρη, χαλί-φρων : χαλαρός. This formation has never been satisfactorily explained, see Hirt, *Handbuch der griech. Laut- und Formenlehre*, p. 328.

There are numerous Greek compounds in which the first member was either verbal or came to be felt as being verbal, as ἀρχέ-κακος, δακέ-θῦμος, ταλα-πενθής, φερέ-καρπος; ἀρκεσί-γυνος, λυσί-πονος, ταννοσί-πτερος, τερψί-μβροτος, φῦσι-ζοος. These latter formations came to be associated with the s-aorist and then became productive, as φθεισί-μβροτος : ἔφθεισα.

CLASS II.

§ 290. In this class the first member was an indeclinable particle which only occurred in compounds already in the parent Indg. language, as ἀ-, ἀν- (Skr. a-, an-, Lat. in-, Engl. un-) the weak grade of Indg. *ne, not (§ 85, 1), cp. ἀ-γνωτος (Skr. á-jñātah), ἀ-θεος, ἀ-τῖμος, ἀ-παις, ἀν-υδρος (Skr. an-udrāh), ἀν-αίτιος, ἀν-θμοιος. ἀ- (Skr. sa-) = Indg. *sem- the weak grade of *sem-, one, cp. ἀ-παξ, ἀ-πλόος. δυσ- (Skr. dur-), cp. δυσ-αλγής, δύσ-θῦμος, δυσ-μενής (Skr. dur-manāh), δυσ-μῆτηρ, δυσ-τυχής, δύσ-φατος.

CLASS III.

§ 291. In this class the first member was an original adverb which also existed as an independent word, as

ἀμφί-δέξιος, ἀμφί-πολος, ἀνά-λογος, ἀνά-μεσος, ἀπό-τισις,
ἀπό-φονος, ἐκ-γενής, ἔκ-νομος, ἐπί-γαιος, ἐπί-θετος (Skr.
ápi-hitah), ἐπί-χαλκος, κατά-χρυσος, παρά-λογος, παρα-
χρῆμα, προ-ηγεμών, πρό-κακος, προσ-έσπερος, πρόσ-ωπον,
σύν-δουλος, σύν-τρεις, ὑπερ-άνθρωπος, ὑπερ-δέξιος, ὑπ-
αρχος, ὑπό-θεσις (Skr. úpa-hitiḥ), ὑπό-θετος, ὑπό-ξυλος.

CLASS IV.

§ 292. In this class the first member was a case-form or a form which came to be used as an adverb in Greek, as δώ-δεκα (Skr. dvā-daśa), Νεά-πολις; νουν-εχής, παν-ῆμαρ; Διόσ-δοτος, Διόσ-κουροι, κυνόσ-ουρα, νεώσ-οικος, Πελοπόν-
νησος from Πέλοπος νῆσος; Ἀρηί-φιλος, δορί-πονος, ἑαρί-
δρεπτος, μεσαι-πόλιος, ὁδοι-πόρος, ὁρει-βάτης, πυρί-καυστος;
δακρυσί-στακτος, ναυσι-κλυτός, ὁρεστι-γενής, πᾶσι-φιλος.
ἀμα-τροχιά, παλαί-φατος, παν-αίολος, χαμαί-γενής.

ACCIDENCE

CHAPTER IX

DECLENSION OF NOUNS

§ 293. In the parent Indg. language nouns and adjectives were declined alike without any distinction in endings. This system was preserved in Greek, Latin, Sanskrit and most of the other languages. They are divided into two great classes according as the stem ends in a vowel or a consonant. In the former case they belong to the vocalic and in the latter to the consonantal declension.

§ 294. Nouns had originally three numbers: singular, dual and plural. The singular and plural were used in the same manner as in the historic periods of the separate languages. The dual is in form a singular, the formative elements of which originally expressed the idea of what belonged naturally together in a pair or couple, as ὄφθαλμῶ, ὄμματε, ὄσσε, Skr. akṣí, *both eyes*; χεῖρε, Skr. hástāu, *both hands*; πýχε, Skr. bāhú, *both arms*; πόδε, Skr. pādāu, *both feet*; and similarly μηρώ, ὄμω, &c. It then came to be used for two objects which were associated together, as Hom. βόε, Skr. gávāu, *a yoke of oxen*; Hom. ἵππω, Skr. áśvā, *a pair of horses*; Hom. ἄρνε, *a pair of lambs for sacrifice*; τὼ θέω, *the two goddesses* (Demeter and Persephone); τὼ ταρία, *the two treasurers* (of Demeter and Persephone). When two different objects were associated together only the first of them was named and put in the dual. This is called the elliptical dual, as Skr. uśásā, *morning and night*; áhanī, *day and night*; dyávā, *heaven and earth*; pitárāu, *father and mother, parents*; Hom.

Aīarτε, Ajax and Teukros. In prim. Indo-Germanic the words for *both* (Skr. *ubhāu*, *āmphi*, Lat. *ambo*) and *two* (Skr. *dvāu*, *dīw*, *dvō*, Lat. *duo*) were also used along with the dual, the former to express collectivity and the latter separate objects or two out of many, i. e. plurality. At a later stage these two words came to be regarded as expressing the duality and then the noun was often put in the plural. This was the beginning of the loss of the dual in the separate languages. In Greek and Vedic the dual was rarely used without the word for *two* except when the objects referred to were regarded as a pair or couple. But even in prim. Indo-Germanic the dual was not a fully developed number like the singular and plural. Each of the latter numbers had many more case-forms than the dual. The dual had only one form for the nom. voc. and acc. masculine and feminine, one for the nom. voc. and acc. neuter, one for the dat. abl. and instr. all genders, and similarly one for the gen. and one for the locative. It was preserved in Aryan, Greek, Old Irish and also to a great extent in Baltic-Slavonic, but it disappeared almost entirely in the prehistoric period of all the other languages. The dual was fast becoming obsolescent in the oldest historic period of the Greek language. In Homer objects which go in pairs or couples were expressed more frequently by the plural than the dual, and it is remarkable that the word for *parents* is only used once by him in the dual—*ἄταρ οὐ τί μοι αῖτιος ἄλλος, ἀλλὰ τοκῆε δύω, τὼ μὴ γείνασθαι δφελλον, θ 312.* In some dialects the dual is not found at all. It occurs in Boeotian, Arcadian and also occasionally in Doric. It survived longest in Attic, in the oldest period of which it was used almost in the same manner as in Homer. After it had become obsolete in the Attic vernacular it was later restored again artificially in literature. By about the end of the fourth century B.C. it had disappeared in the vernacular of all the Greek dialects.

§ 295. It is now a generally accepted theory that nouns had the three genders—masculine, feminine and neuter—at the time the parent Indg. language became differentiated into the separate branches of Aryan, Greek, Italic, Keltic, Germanic, Baltic-Slavonic, &c. But in an earlier period of the parent Indg. language there must have been a stage when there was no characteristic inherent in the form of a noun which indicated whether it belonged to the masculine, feminine or neuter gender; compare for example the *r-*, *n-* and other consonantal-stems in Greek, Latin and Sanskrit. In the consonantal declension nouns denoting males must originally have been masculine and those denoting females must have been feminine, irrespective of their form. But the exact process whereby inanimate objects came to be masculine or feminine in this declension will probably always remain an unsolved problem. And these remarks also apply to the *ī-*, *ū-* and diphthongal-declensions. In all these classes of nouns the gender could not be determined by the form, but only by the meaning or by an accompanying attribute such as a demonstrative pronoun, which in the earliest period of the Indg. language had distinctive forms for the masculine, feminine and neuter gender; cp. Indg. **so*, **sā*, **tod* = ó, ñ, τó, Skr. *sá*, *sā*, *tát*, Goth. *sa*, *sō*, *þat-a*. Even in the *ā*-declension the *-ā* of the nominative had originally nothing to do either with gender or case, it was simply the bare stem-ending of a dissyllabic heavy base. It is probable that in this declension a certain number of nouns ending in *-ā* originally denoted females, as Vedic *ganā-*, *wife of a god*, Boeot. *βavā*, Att. *γυνῆ*, *woman*, and that then by analogy all nouns ending in *-ā* became feminine. The dem. pronoun may also have been an important factor in bringing it about that all nouns belonging to this declension became feminine. The Greek, Latin and Baltic-Slavonic masculines belonging to this declension were all nouns which had changed their gender

in these languages separately (§ 323). After the ā-declension had become fully established as being the only declension which contained exclusively feminine nouns, it then came to be regarded as specially characteristic of the feminine gender in general. And from this declension or rather a sub-division of it (§ 322) there was formed the grammatical feminine to those classes of nouns which did not originally distinguish the masculine and feminine in form, viz. the i-, u-, r-, n-, nt-, -s- and other consonantal-stems. And it even sometimes was used to form the feminine from o-stems, cp. Skr. *vṛkī*, *she-wolf*, *dēvī*, *goddess* : to the masculine *vṛkah*, *dēvah* beside *āśvā*, *mare*, masculine *āśvah*. And in like manner, apart from the neuter nouns about which we shall speak presently, it is also probable that a certain number of nouns whose stems ended in -o originally denoted males, as Skr. *āśvah*, Lat. *equus*, *horse*; *λύκος*, Skr. *vṛkah*, Lat. *lupus*, Goth. *wulfs*, Lith. *vilkas*, *he-wolf*, and that then by analogy all nouns whose stems ended in -o became masculine. See § 324. By comparing the oldest periods of the separate languages, it is clear that this development of grammatical gender in the ā- and o-declensions must have taken place during the prim. Indg. period. Through causes which it is now impossible to determine grammatical gender was further developed during this period whereby i- and ū-stems, monosyllabic abstract nouns, abstract nouns with the stem-endings -ti, -ni, -den, -don, -(i)jōn, -in, -t, -tāt and -tūt all became feminine; and abstract nouns with the stem-endings -tu, -nu and nouns with the stem-endings -en, -on denoting parts of the body, all became masculine (Brugmann, *Grundriss*, &c., vol. ii, part 2, second ed., pp. 99-101). From the above account of the masculine and feminine genders we have generally left out of consideration the change of gender which took place in the individual languages, such as that in Greek and Latin

grammatical gender sometimes became subordinate to natural gender, as *ἡ ἄνθρωπος*, *ἡ θεός*, *haec lupus* after the analogy of nouns like *ἡ γυνή*, *haec fēmina*; or that in Greek and the Germanic languages natural gender often became subordinate to grammatical gender, as in words like *ἡ δάμαρ*, *ἡ δᾶρ*, in diminutives like *γύναιον*, *πατρίδιον*, *παιδίον*, or in OE. neuters like *cild*, *child*; *folc*, *folk*; *hors*, *horse*; *lamb*, *lamb*; *wif*, *wife*; or that o-stems denoting the names of trees are feminine in Greek and Latin and the names of rivers masculine, whereas in the Germanic and several other languages the latter are mostly feminine.

The neuter gender differed from the masculine and feminine insomuch that it only had one form for the nominative and accusative singular. As we have seen above, there was originally no characteristic inherent in the form of a noun to indicate whether it belonged to the masculine, feminine or neuter gender. The grammatical neuter gender, as such, only came into existence after the masculine and feminine had become fully established. In its earliest stage it was only used to represent inanimate objects and these only in the nominative and accusative singular, for which the bare stem was used in the i-, u- and all consonantal-stems, and the accusative in the o-stems. The other cases of the singular were formed at a later period after the analogy of the masculines. The i-, u- and consonantal-stems mostly denoted the names of material, inert mass, or substance of being or action. The form in *-om*, as compared with the masculine nominative in *-os*, expressed the passive or inactive recipient, that is the accusative, which practically agrees with the meanings of the former classes of nouns. But as in the i-, u- and consonantal-stems there was no distinction in form between the nominative and accusative, the accusative in *-om* also came to be used for the nominative. Here as in the mas-

culines and feminines natural gender was often made subordinate to the grammatical gender in the individual languages, cp. *ἡ δάμαρ*, *τὸ γύναιον* or O.E. *wif*, *wife*, *cild*, *child*.

What is called the neuter plural in the oldest periods of the separate Indg. languages was originally a feminine collective singular. This applies not only to the *o*-stems (§ 326) but also to the *i*-, *u*- and consonantal-stems. The nominative and accusative ending *-ā* of the *o*-stems agrees with the nominative singular ending of the *ā*-stems, *-ə* (Skr. *-i*, Gr. *-α*), the ending of the nominative and accusative of the consonantal stems, was in all probability the weak grade ablaut of the above *-ā*. The nominative and accusative endings of the *i*- and *u*-stems were *-ī* and *-ū*, which may also be a contraction of *-i*, *-u+ə*. The *-i* however can also be the *-ī* of the nominative singular of the *jā*-stems (§ 322). During the prim. Indg. period these feminine collective singulars ceased to be felt as such and came to be regarded as plurals, and then the other cases of the plural were formed after the analogy of the masculines just as had previously been done in the singular. This accounts for the fact that in Greek and Sanskrit the nominative plural takes the verb in the singular, see § 326.

§ 296. The parent Indg. language had at least eight cases—probably more—if we call the vocative a case, which strictly speaking it is not because it does not stand in any syntactical relation to the other members of the sentence. These were: the Nominative, Vocative, Accusative, Genitive, Ablative, Dative, Locative and Instrumental, all of which were preserved in Sanskrit. The original functions and uses of these cases belong to comparative syntax. Of the origin of the case-endings practically nothing is known. Although much has been written upon the subject, it is all mere guess-work without any solid foundation. It is reasonable to suppose that the

case-endings were originally independent words, but what their precise meaning was in each particular case it is impossible to determine. It is remarkable that Greek, which in other respects is so archaic, should have lost so many of the original case-forms. In the following brief description of the formation of the case-endings in the parent Indg. language many details are omitted, especially such as relate to analogical formations in the individual languages. For details of this kind the student should consult the declensions themselves.

§ 297. In order not to have to repeat in each case the meanings of the Sanskrit, Gothic and Lithuanian words used to illustrate the various case-endings, a list of the words is given here for easy reference. Sanskrit : agníḥ, fire ; ákṣi, eye ; áśvā, mare ; ávih, sheep ; bháran (stem bhárant-, bhárat-), bearing ; bhūḥ, earth ; dātā, giver ; dāvánē, to give ; dēví, goddess ; dhárā, stream ; dhíḥ, thought ; durmanāḥ (stem durmanas-), dispirited ; dyáuḥ, sky, day ; gáuh, cow, ox ; jánah (stem jánas-), race ; loc. mūrdhán, on the head ; nadíḥ, river ; náma (stem náman-), name ; náuh, ship ; pášu, cattle ; pát (stem pād-, pad-), foot ; pitā (stem pitár-), father ; purú, much, many ; rájā (stem rájan-), king ; súnúḥ, son ; tanúḥ, body ; neut. trí, three ; vāri, water ; vidmánē, to know ; vṛkāḥ, wolf ; yugám, yoke. Gothic : ansts, favour ; baírands, bearing ; brōþar, brother ; fadar, father ; faíhu, cattle ; giba, gift ; guma, man ; juk, yoke ; mawi, girl ; sunus, son ; tuggō, tongue ; wulfs, wolf. Lithuanian : avis, sheep ; rankà, hand ; viłkas, wolf.

SINGULAR.

§ 298. The nominative of the masculine and feminine was formed in four ways. (a) In the ā- and jā-declensions by the bare stem without case-ending, as χώρā ; Skr. áśvā, Lat. equa, mare, Goth. giba, gift (§ 321) ; -i beside -(i)jə,

the former occurs in Skr. *dēvī*, *goddess*, Goth. *mawi*, *girl*, and the latter in *φέρουσα* from **φέροντja* (§ 322). (b) In the n-, r- and s-stems by simply lengthening the vowel of the stem-ending, as *ποιμήν*, *δαίμων*; Goth. *guma*, *man*, Skr. *rājā*, *king*, Lat. *homo*, *sermo*; Goth. *tuggō*, *tongue* (§ 345); *πατήρ*, Lat. *pater*, Goth. *fadar*, Skr. *pitā*, *father* (§ 360); *δώτωρ*, Lat. *dator*, Skr. *dātā*, *giver* (§ 361); *δυσμενής*, *hostile*, Skr. *durmanāḥ*, *dispirited* (§ 366); *γέλως*, *aīdōs* (§ 368). (c) The o-, i-, u-, ī- and ū-stems and also stems ending in an explosive (except monosyllabic or root nouns) had simply the case-ending -s, as *λύκος*, Skr. *vṛkāḥ*, Lat. *lupus*, Goth. *wulfs*, Lith. *vilkas*, *wolf* (§ 325); *πόλις*, *čis*, Skr. *ávih*, Lat. *ovis*, Lith. *avis*, *sheep* (§ 328); *πῆχυς*, *arm*, Skr. *sūnūḥ*, Goth. *sunus*, *son*, Lat. *fructus* (§ 331); *κῆς*, *weevil*, Skr. *dhīḥ*, *thought* (§ 330); *ἰχθύς*, *fish*, Skr. *tanūḥ*, *body* (§ 334); *φύλαξ*, *μάστιξ*, *κατῆλιψ*, *λαμπάς*, *κόρυς*, *νέότης* from **νεφοτάτς* (§§ 342-3); Skr. *bhāraṇ* from **bhárants*, Lat. *ferēns*, Goth. *baírands*, *bearing* (§ 352); *διδούς* from **διδοντς*, and similarly *δαμνᾶς*, *δεικνῦς*, *τιθεῖς*, &c. (§ 354); *χαρέις* from **χαρι费ντς* (§ 356). (d) The diphthongal stems and the monosyllabic consonantal stems had the case-ending -s and lengthening of the stem-ending, as *ναῦς*, Skr. *náuḥ*, *ship* (§ 336); *Ζεύς*, cp. Skr. *dyáuḥ*, *sky* (§ 387); *βασιλεύς* (§ 338); *βοῦς*, Skr. *gáuḥ*, *cow, ox* (§ 339); *πούς*, Skr. *pāt*, Lat. *pēs*, O.E. *fōt*, *foot* (§ 342).

§ 299. The vocative of the masculine and feminine had no special case-ending. In the ā- and o-declensions it ended respectively in -ā and -e which stood in ablaut relation to the -ā and -o of the nominative, as Hom. *νύμφă*, *δέσποτă* (§ 321); *λύκε*, Skr. *vṛka*, Lat. *lupe*, Goth. *wulf*, *wolf* (§ 325). The original ending of the i-stems was -i when the preceding syllable had the chief accent of the word, and -ei or -oi when the accent was on the ending. Greek and the Germanic languages generalized the former and Sanskrit the latter, as *πόλι*; Goth. *anst*, *favour, beside*

Skr. *ágnē* : nom. *agnih*, *fire* (§ 328). And similarly -u beside -eu or -ou in the u-declension, as *πῆχυ*, Goth. *sunu*, beside Skr. *sūnō* (§ 331). The long ī- and ū-stems originally ended in -i, -u beside -i, -ū, the former became generalized in Sanskrit and the latter in Greek, as Skr. *nádi* : nom. *nadīh*, *river*, *tánu* : nom. *tanūh*, *body*, *σῦ*, *iχθῦ*. In the monosyllabic ī-stems the nom. was used for the vocative in both languages, as *kīs*, *dhīh* (§ 330); and similarly with the monosyllabic ū-stems in Sanskrit, as *bhūh*, *earth* (§ 334). The diphthongal and the n-, nt-, went-, r- and s-stems had the bare stem-ending, as *βοῦ* (§ 339), *Zεῦ*, Lat. *Jū-piter* (§ 337), *βασιλεῦ* (§ 338); *δαιμον*, cp. Skr. *rājan* (§ 345); *γέρον*, cp. Skr. *bháran* from **bhárant* (§ 352); *χαρίεν* from **χαριφεντ* (§ 358); *πάτερ*, Skr. *pítar* (§ 380), *δῶτορ*, Skr. *dátar* (§ 361); *δυσμενές*, Skr. *durmanah* (§ 366). The nominative was used for the vocative of stems ending in a simple explosive (§ 342).

§ 300. The case-ending of the masculine and feminine accusative was -m or -ṁ (= a, Skr. -a, Lat. -em, § 65, 1) according as the stem ended in a vowel or a consonant, as *χώραν*, Skr. *áśvām*, Lat. *equam*, Goth. *giba*; *λύκον*, Skr. *výkam*, Lat. *lupum*; *πόλιν*, cp. Skr. *agním*, *fire*, Lat. *sitim*, *partim*; *πῆχυν*, cp. Skr. *sūnum*, Lat. *fructum*; *Ζῆν*, cp. Skr. *dyám*, *sky*, from **djé(u)m*; *βῶν*, Skr. *gáṁ*, *cow*, *ox*, from **gō(u)m*; the long ī- and ū-stems had -im, -ūm beside -ijm, -uwṁ, as *κīν*, *iχθῦν*, Skr. *dhíyam*, *tanúvam*; Hom. *νῆα*, Skr. *návam*, Lat. *nāvem*, *ship*, from **náwṁ*; *βασιλῆα*, -éā, from *-ηfā; *πόδα*, Skr. *pádam*, Lat. *pedem*; *ποιμένα*, *δαιμονα*, Skr. *rājānam*; *φέροντα*, Skr. *bhárantam*, Lat. *ferentem*; *χαρίεντα* from **χαριφεντα*; *πατέρα*, Skr. *pítaram*, Lat. *patrem*; *δῶτορα*, Skr. *dátarām*, Lat. *datōrem*; *δυσμενέα*, -ῆ, Skr. *durmanasam*; *αιδῶ* from **aiδοσα*. The Sanskrit ending -am of the consonantal stems had the -m from the accusative of the vocalic

stems; and similarly *-av* for *-a* in the Cyprian dialect and also occasionally in other dialects.

§ 301. The case-ending of the nom. voc. and acc. neuter was *-m* in the o-declension, as *ȝugóv*, Skr. *yugám*, Lat. *jugum*, *yoke* (§ 326). All other neuters had the bare stem-ending, as *īðri*, cp. Skr. *vári*, *water*; *āstv*, *ñdú*, cp. Skr. *pášu*, Lat. *pecu*, Goth. *faihu*, *cattle*; *kñr*, *gála*, *méli*, from **kñrð*, **gala*kt, **meli*t; *ónoma*, Skr. *náma*, Lat. *nómen*, *name*; *féron* from **féronτ*, cp. Skr. *bhárat* (§ 353), *bearing*; and similarly *ðaþnáv*, *ðeiknún*, *ðiðn*, *tiθén*, &c., *χaríen*; *ἀπάτορ*; *γένος*, Skr. *jánah*, Lat. *genus*, *race*; *δυσμενές*, Skr. *durmanah*.

§ 302. The original genitive case-ending was *-es*, *-os* and *-s*, which stand in ablaut relation to each other. *-s* occurred after vowels and *-es*, *-os* after consonants. *-es* was originally used when it had the chief accent of the word, and *-os* when the accent preceded the case-ending. Latin generalized the former and Greek the latter. It cannot be determined whether the Sanskrit ending *-ah* represents *-es* or *-os* because e and o regularly fell together in a. Examples are: *χώρās*, *σκιᾶs*, *τιμῆs*, cp. Skr. *ásvāy-ah*, *of a mare*, Goth. *gibōs*, *of a gift*, Lat. *familiās*, all from *ās*; Skr. *agnéh*, *of fire*, Goth. *anstáis*, from *-eis* or *ois*; Skr. *sūnōh*, Goth. *sunáus*, *of a son*, from *-eūs* or *-oūs*; on the Greek forms, see §§ 328, 331; *kiós* from **kijos*, cp. Skr. *dhiyáh*; *ἰχθύos* from **iχθυfos*, cp. Skr. *tanúvah*; Ion. *youvós*, *ðouvós* from **youfos*, **ðopfos*, cp. Skr. *paśvah*, *of cattle*; Ion. *ηvós*, Att. *νeós*, Skr. *nāvah*, Lat. *nāvis*; *Δiós*, Skr. *divah*; *βoós*, Vedic *gávah*; *πoðós*, Skr. *padah*, Lat. *pedis*; *πoimévos*, *ðaímuvos*, cp. Skr. *rājñah*; *φéronτos*, Skr. *bháratah*, Lat. *ferentis*; *πatpós*, *ðwtoros*, Lat. *patris*, *datōris*; *γéneos*, *γévous*, Skr. *jánasaḥ*, Lat. *generis*; *δuσμeνéos*, *-oūs*, Skr. *durmanasah*; *aíðoūs* from **aíðosos*; *ηπatros*.

The genitive of the o-stems was formed after the analogy

of the genitive of the demonstrative pronoun in prim. Indo-Germanic, cp. Hom. λύκοιο = Skr. व्यक्षस्या, beside τοῖο, Skr. तास्या, Indg. *tosjo; and also prim. Greek *πλυκοσο = Att. Ion. and mild Dor. λύκου, Boeot. Lesb. and severe Dor. λύκω, beside τοῦ, τῷ from Indg. *toso.

§ 303. The ablative case-ending was originally the same as that of the genitive in all stems, but during the prim. Indg. period special case-endings for the ablative (-ēd, -ōd) and the genitive (-sjo) of the o-stems were formed after the analogy of the pronominal endings (§ 408). This ablative case-ending was preserved in Sanskrit and Old Latin, as व्यक्तः : nom. व्यक्तः, युगातः : nom. युगाम्, O.Lat. Gnaivōd, meritōd, inscr. faciliūmed = facillumēd. But it disappeared in Greek except in isolated forms, as Delph. Φοίκω, domo, Cret. τῶ-δε, hinc, ὁ, ὅπω, unde. Its disappearance was doubtless due to the analogy of the other declensions in which the genitive and ablative were alike in form. The adverbial particle -θεν, which originally belonged to words like πόθεν, came to be used to express the ablative, as οἴκοθεν, οὐπανόθεν.

§ 304. The dative case-ending was originally ·ai for all stems. In the ā- and o-declensions it became contracted in prim. Indo-Germanic with the stem-ending whereby ·ā + ai became ·āi and ·o + ai became ·ōi, as खूर्प, तिमी, Skr. ाश्वाय-āi, Lat. equae, Goth. gibái; θεῷ, λύκῳ, Skr. व्यक्षय-ā, Lat. lupō (O.Lat. populoi). In the other stems the old dative was supplanted by the locative in Greek, but the original dative was preserved in isolated forms, such as inf. Att. δοῦναι, Cypr. δοφεναι = Skr. dāvánē, Hom. ἰδμεναι = Skr. vidmánē, adv. खापाइ, Lat. humī. It was regularly preserved in Sanskrit and Latin, as agnáy-ē, hostī; sūn-ávē, fructuī; gávē, bovī; nāvē, nāvī; padē, pedī; rájñē, hominī; námñē, nōminī; bháratē, ferentī; pitrē, dātrē, patrī, datōrī; jánasē, generī.

§ 305. The locative case-ending was ·i in the ā-, o-, ī-, ū-

and consonantal-stems (but see below). In the i- and u-stems the locative ended in -ēi (-ē, § 63) and -ēu which were the lengthened form of the full stems. The n-, r- and s-stems had -i beside no special case-ending. Forms of the latter have only been preserved in isolated forms, as *aíēv*, *aíēs*, inf. *δόμεν*, *ἴδμεν*; Skr. *mūrdhán*, *on the head*.

In the ā- and o-declensions the -i combined with the stem-endings to form the diphthongs -āi and -oī, -eī beside -oi and -ei. The locative of the ā-declension thus fell together with the original dative. In Greek the locative of the o-declension only occurs in isolated forms. Examples are: *χώρα*, *θέρα*, *τιμῆ*, Lat. *Rōmae*, O.Lat. *Rōmai*; *Ισθμοῖ* and in adverbs like *ποῖ*, *πεῖ*, *ἐκεῖ* beside *οἴκοι*, *οἴκει*, cp. Skr. *vīkē*, Lat. *bellī*, *domī*. *κι* from **kijī*, Skr. *dhiyī*; *ἰχθύῖ* from **ἰχθυfī*, Skr. *tanúvi*; Att. Ion. *νηī*, Skr. *nāvī*, Lat. *nāve*; *βασιλῆi* from **βασιληfī*; *βοī*, Skr. *gávi*, Lat. *bove*; *ποδī*, Skr. *padi*, Lat. *pede*; *ποιμένi*, *δάίμονi*, Skr. *rājani*, Lat. *homine*; *φέροντi*, Skr. *bhārati*, Lat. *ferente*; *πατέρi*, Skr. *pitári*, Lat. *patre*; *γένει*, Skr. *jánasi*, Lat. *genere*; *δυσμενέi*, Skr. *durmanasi*; *αιδοī* from **aiðosī*. The adverbial particle -θi also came to be used to express the locative, as *ἄλλοθi*, *οὐρανόθi*.

The locative of the i- and u-stems was remodelled in prim. Greek after the analogy of the consonantal and other stems where -i was regular (§§ 328, 331). The regular forms were preserved in Sanskrit, Latin and Gothic, as Vedic *agnā* (see above), Lat. *hostī*, Goth. *anstái*; Skr. *sūnāu*, Goth. *sunáu*, Lat. *senatū*, *fructū*. In the i-stems the dative and locative regularly fell together in Latin.

§ 306. The instrumental was not preserved in Greek except in isolated forms. It is doubtful what was its original ending in most of the stems, because there is no clear agreement in its formation among the languages which have an instrumental in historic times. In the ā-, o-, i- and u-declensions it ended in -ā, -ō (-ē), -i and -ū, as Vedic *āśvā*,

with a mare; dhára, with the stream; κρυφῆ, λάθρα, -η; Vedic vṛkā, Goth. wulfa, Lith. vilkù, πώ-ποτε, Hom. ἐπισχερώ, ἀμαρτῆ. In the other stems it probably ended in -a beside -bhi and -mi which resulted from the endings of three originally different cases being used for the instrumental. The -bhi is the same as the instrumental plural ending in Sanskrit -bhi-h. In Greek it only occurs in the epic language of Homer and his imitators, and there mostly with the ā- and o-stems, rarely with other stems. In Homer it had more frequently a plural than a singular meaning, and it was used to express both the instrumental, ablative and locative, seldom the genitive and dative. The -mi occurs in the Baltic-Slavonic languages in the singular and the plural and in the Germanic languages only in the latter. The -a occurs in adverbs like ἄμα, παρά, πεδά, and possibly also in the Latin consonantal stems, homine, patre, &c., but as the locative (-i) and instrumental (-a) endings regularly fell together, the -e can represent either case. Examples of -bhi are: ἀγέληφι, βίηφι(ν), κεφαλῆφιν; θεόφι(ν), ζυγόφιν, Ἰλιόφιν, ἴφι, ναῦφι(ν), ἐρέβεσφι, ὅρεσφι(ν). The -v was of the same origin as in the locative plural (§ 316).

DUAL.

§ 307. For an account of the original case-forms and uses of the dual in the parent Indg. language see § 294.

§ 308. The nominative, vocative and accusative of the masculine and feminine was formed differently in the different stems. In the ā-stems the ending was -ai, as Skr. áśvē, on Gr. χώρα, τιμά, see § 321. In the o-stems it was -ōu beside -ō, Greek generalized the latter, as λύκω, Lith. vilkù, Vedic vṛkāu beside vṛkā. In Sanskrit the -āu, -ā was extended by analogy to the ī-, ū- and all consonantal-stems. In the i- and u-stems it was -ī and -ū, as Skr. agnī, sūnū, on Gr. πόλεε, πόλει, see § 328, and on πήχεε, πήχει,

§ 331. In the ī-, ū-, diphthongal and consonantal-stems Greek has -e which seems to be the original case-ending in all these stems, but it is not certain because just as the -āu, -ā of the o-stems was extended by analogy to the ī-, ū- and consonantal-stems in Sanskrit, so also the Greek -e may be a new formation after the relation of the old nom. plural ending *-ws (§ 324) : to the nom. plural ending -es so to the dual ending -ω an -e may have been formed. Examples are : κίε, ἵχθύε, νῆε, βόε, πόδε, ποιμένε, φέροντε, χαρίεντε, πατέρε, δυσμενέε, -εῖ.

§ 309. The nominative, vocative and accusative neuter ending was -oi in the o-stems, as Vedic *yugé*, on Gr. ξυγώ, see § 326. In all the other stems the ending was probably -i, which was supplanted by the -e of the masculine and feminine in Greek, as Skr. akṣī, námanī, jánasī = ḍσσε, ὀνόματε, γένεε.

§ 310. It is impossible to determine what was the original case-ending of the genitive and locative in the various declensions because there is no agreement among the languages which have preserved the dual in historic times. Some scholars assume that it was -oūs = the Skr. -ōḥ in áśvayōḥ, vṛkayōḥ, agnyōḥ, sūnōḥ, padōḥ, rájñōḥ, pitrōḥ, &c. The dative, ablative and instrumental ending contained the element -bh- (Skr. -bhyām) beside -m-, but what the Indg. vocalism was it is impossible to determine. In Greek Hom. -ouν, Att. Ion. &c. -ou became used in all stems except the ā-stems to express the functions of all the five cases. On the origin of -ouν, -ou and -auν, -au, see §§ 321, 325.

PLURAL.

§ 311. The separate languages show that the nominative was used for the vocative already in prim. Indo-Germanic. The original case-ending of the masculine and feminine nominative and vocative was -es in all stems. The -es

became contracted with the stem-endings of the *ā*- and *o*-stems in prim. Indg. whereby *-ā+es* became *-ās* and *-o+es* became *-ōs*, as Skr. *áśvāḥ*, Osc. *scriptas*, *scriptae*, Umbr. *urtas*, *ortae*, Goth. *gibōs*. Skr. *vṛkāḥ*, Goth. *wulfōs*, Osc. *Núvlanús*, *Nolani*. On the endings in Greek and Latin see §§ 321, 325. *πόλεις*, Skr. *agnáyah*, Lat. *hostēs*, Goth. *ansteis*, all from *-ejes*; Ion. *πήχεες*, Att. *πήχεις*, Skr. *sūnávah*, from *-ewes*; *κίες*, Skr. *dhíyah*, from *-iyes*; *ἰχθύες*, Skr. *tanúvah*, from *-uwes*; Dor. *νᾶες*, Att. Ion. *νῆες*, Skr. *návah*; *βόες*, Skr. *gávah*; *πόδες*, Skr. *pádah*; *ποιμένες*, Skr. *rájānah*; *φέροντες*, Skr. *bhárantah*; *πατέρες*, Skr. *pitárah*; *δυσμενέες*, *-eīs*, Skr. *durmanasaḥ*.

§ 312. The case-ending of the masculine and feminine accusative was *-ns* or *-ṇs* (= *-as*, Skr. *-ah*, Lat. *-ēs*, Goth. *-uns*) according as the stem ended in a vowel or a consonant, as Cret. *τιμάνς*, Att. Ion. Dor. *τιμάς*, Lat. *equās*; on the endings in Skr. *áśvāḥ* and Goth. *gibōs* see § 321; Cret. *λύκονς*, Att. Ion. and mild Dor. *-os*, Boeot. and severe Dor. *-ως*, Lesb. *-ois*, Lat. *Iupōs*, Goth. *wulfans*; Cret. *πόλινς*, Ion. *πόλις*, Lat. *hostis*, Goth. *anstins*; Cret. *vīvns*, Goth. *sununs*, Lat. *fructūs*. *κίας*, Skr. *dhíyah*; *ἰχθύας*, Skr. *tanúvah*; Ion. *νῆας*, Skr. *návah*, Lat. *nāvēs*; *βόας*, Lat. *bovēs*; *πόδας*, Skr. *padah*, Lat. *pedēs*; *ποιμένας*, Skr. *rájñah*, Lat. *hominēs*; *φέροντας*, Skr. *bhárataḥ*, Lat. *ferentēs*; *πατέρας*, Lat. *patrēs*, cp. Goth. *brōþrunz*, *brothers*; *δυσμενέας*, Skr. *durmanasaḥ*. The Cret. dialect had *-av̥s* after the analogy of the vocalic stems.

§ 313. The ending of the nominative, vocative and accusative neuter was *-ā* in the *o*-stems, *-ī* in the *i*-stems, *-ū* in the *u*-stems, and *ə* (= *-a*, Skr. *-i*) in the consonantal stems, see § 295. Vedic *yugā*, Lat. *juga*, Goth. *juka*, *yokes*, on *ȝugā*, see § 326; Vedic *trī*, *tria*, on *trīla*, *īdriā*, see § 329; Vedic *purū*, *much*, *many*, on *āstη*, *īdēa*, see § 333. *ὸνόματα*, Skr. *nāmāni*; *φέροντα*, Skr. *bháranti*.

§ 314. The original genitive ending was probably ·ām, a contraction of ·ā + ḫm̄, in the ā-stems, and ·ōm̄ (= ·ōv, Skr. ·ām, Lat. ·om, ·um) in all other stems. In prim. Greek and Latin the genitive of the ā-stems was remodelled after the analogy of the pronouns, cp. Hom. τάων from *τάσων, Skr. tāsām, Lat. is-tārum, Indg. *tāsōm, whence Hom. (Aeolic) θεάων, Boeot. -άων, Ion. -έων from older -ήων, Att. -ῶν, Dor. -ᾶν Lesb. -ᾶν, Lat. equārum. λύκων, θεῶν, O.Lat. Rōmānom, deum, class. Lat. lupōrum with pronominal ending; πολίων, τριῶν, Lat. hostium, trium; Lat. fructuom, -uum, -um, on πήχεων, see § 331; κιῶν, Skr. dhiyām; iχθύων; Hom. νηῶν, Skr. nāvām; βοῶν, Skr. gávām, Lat. bovom, boum; ποδῶν, Skr. padām, Lat. pedum; ποιμένων, Skr. rājñām, Lat. hominum; φερόντων, Skr. bhāratām; πατρῶν, Lat. patrum; γενέων, γενῶν, Skr. jánasām, Lat. generum; δυσμενέων, -ῶν, Skr. durmanasām.

§ 315. The dative and ablative ending contained the element ·bh· (Skr. ·bhyaḥ, Lat. ·bos, ·bus) beside ·m-, but it is uncertain what was the Indg. vocalism.

§ 316. It is doubtful what was the original case-ending of the locative. Sanskrit and Lithuanian (dial.) has ·su and Old Slavonic ·chū = su. Greek has ·si. Most scholars assume that ·su is the original ending and that ·si was a new formation with the substitution of ·i for ·u after the analogy of the ·i of the locative singular. It is however possible that the original ending was simply ·s and that ·u and ·i were deictic locative particles, the latter of which became generalized in Greek and the former in the other languages. In the vocalic and n- and r-stems the intervocalic ·s· would regularly have disappeared in Greek (§ 213, 2), but it was restored again after the analogy of stems ending in an explosive or ·s, as in ποστί, ποσί, Skr. patsú, φύλαξι, φλεψί, γένεσσι, γένεσι, Skr. jánaḥsu. Such new formations are: θύρασι (§ 321), Skr. áśvāsu;

λύκοισι, Skr. vṛk̄eṣu; τρισί, Skr. triṣú; πήχεσι, Skr. sūnūṣu; κισί, Skr. dhiṣú; ḫθύσι, Skr. tanūṣu; ναυσί, Skr. nāuṣu; βουσί, Skr. góṣu; ποιμέσι, Skr. rājasu; πατράσι, Skr. pitṛṣu. In the Aeolic dialect including Homer the ending -εσι later -εσι of the s-stems was extended by analogy to all stems except the ā-, ja- and o-stems, as πολίεσσι, ταχέεσσι, συέσσι, νηέσσι, βούεσσι, βασιλήεσσι, ποδέσσι, ἀγώνεσσι, πάντεσσι, ἀνδρεσσι, θυγατέρεσσι. The ending -σιν had its -ν from pronouns like ἡμίν, ἡμῖν, Lesb. ἔμμι(ν); ὑμίν, ὑμῖν, Lesb. ὕμμι(ν).

§ 317. The case-ending of the instrumental was -bhis (Skr. -bhiḥ) beside -mīs except in the o-stems which had -ōīs, as θεοῖς, λύκοις, Skr. vṛk̄āīḥ, Lat. lupīs, Lith. vilkaīs. On the -bh- and -m- forms, see the instrumental singular (§ 306). And on χώραις, σκιαις, see § 321.

§ 318. Few Indg. languages preserved the eight cases described in the foregoing paragraphs. They were all preserved in Sanskrit as also in the Baltic-Slavonic languages with the exception of the ablative. Through syncretism it arose in Greek that in the place of several case-forms with different meanings one case-form became used which united the functions of these. Thus the case which we call the dative in Greek grammar embraces both a dative, locative and instrumental meaning. But the dative forms of Greek grammar were originally partly old dative forms as λύκῳ, partly locative forms, as ποδὶ, ποσὶ, and partly instrumental forms as λύκοις. Hence it arose in Greek that certain dative forms had at the same time the functions of the locative and instrumental; certain locative forms at the same time the functions of the dative and instrumental; and certain instrumental forms at the same time the functions of the dative and locative. Also what is called the genitive and dative dual in Greek grammar was used to express the functions of both the genitive, locative, dative, ablative, and instrumental. By syncretism it also

arose in Greek that the genitive acquired both the functions of the old genitive and ablative. And similarly the case, which we call the ablative singular in Latin grammar, embraces both an ablative, locative and instrumental meaning. But the Latin ablative forms were originally partly old ablative forms, as *equō(d)*, and partly old locative and instrumental forms, as *pede*, *patre*, *homine*. And in like manner what is called the dative singular in Gothic is originally the instrumental in the *a-* and masculine *i*-stems, the locative in the feminine *i*, the *u*, and all consonantal-stems; and the dative only in the *ō*-stems. And what is called the dative plural is in form the instrumental.

§ 319. In the declension of nouns and adjectives it is not only necessary to take into consideration the case-endings, but also the stem-endings which often formed an important factor especially in the declension of the *i*, *u*- and diphthongal stems as well as in most of the consonantal stems. These classes of nouns and adjectives originally contained various grades of ablaut either in the root-syllable, as in the monosyllabic consonantal stems and in some of the diphthongal stems, which contained no suffix or formative element, cp. *πώς*, Lat. *pēs* : *ποδ-*, *ped-* (§ 342); nom. **djéus*, *Zeús* : loc. **djéwi*, Vedic *dyávi* : gen. **diwós*, Skr. *diváḥ* (§ 387); or in the stem-ending, as in the *i*, *u*, *n*, *r*- and *s*-stems, cp. nom. sing. *-i-s*, *-u-s* : nom. pl. *-ej-es*, *-ew-es* : loc. sing. *-ēi*, *-ei*, *-ēu*, *-eu* (§§ 328, 331); *ποι-μήν* : *ποι-μέν-α* : **ποι-μν-os*, **ποι-μα-σι* (§ 345); *πα-τήρ* : *πα-τέρ-α* : *πα-τρός*, *πα-τρά-σι* (§ 360); *γένος*, Hom. *ἰδρόα* from **ἰδρόσ-α* : *γένεσ-α* : *ἰδρώς*. According as the stem-ending in the diphthongal and consonantal stems originally contained the strong or weak grade of ablaut, the various cases are divided into strong or weak case-forms. The strong case-forms were: the nominative, vocative and accusative singular and dual, the locative singular and nominative plural, and possibly also the accusative plural (§ 345).

All the rest were weak case-forms. This original distinction between strong and weak case-forms was most faithfully preserved in Sanskrit, but in most of the other Indg. languages it became considerably obliterated through new formations caused by levelling out one or other of the stem-forms, cp. the *n*-declension in Greek (§ 345).

A. THE VOCALIC DECLENSION

I. THE ā-DECLENSION.

§ 320. The ā-declension originally contained only feminine nouns as in Sanskrit and the Germanic languages, but in Greek, Latin and the Baltic-Slavonic languages a certain number of original abstract nouns acquired a concrete meaning and then became masculine (§ 323). The ā-declension is divided into ā-stems and jā-stems. On the change of ā to ē in Attic and Ionic see § 51.

§ 321.

a. FEMININE ā-STEMS.

Indg. Singular.

Nom.	·ā	χώρā	σκιά	τīμή
Voc.	·ā	χώρā	σκιά	τīμή
Acc.	·ām	χώρān	σκιάν	τīμήν
Gen.	·ās	χώρās	σκιάs	τīμῆs
Dat.	·āi	χώρa	σκιά	τīμῆi

Dual.

Nom. Voc. Acc.	·ai	χώρā	σκιά	τīμᾶ
Gen. Dat.	·?	χώρaιn	σκιαiñ	τīμaíñ

Plural.

Nom. Voc.	·ās	χώρaι	σκιάí	τīμaí
Acc.	·āns	χώρaś	σκιάś	τīμaś
Gen.	·ām	χωρān	σκιώñ	τīμōñ
Dat.	·āsu (loc.)	χώρais	σκιaís	τīμaís

Singular: The -ā, -η corresponds to the nom. endings in Skr. áśvā, *mare*, Lat. *equa*; Goth. giba, *gift*, Lith. rankà, O.Slav. rąka, *hand*, with regular shortening of the -ā in all these languages except Sanskrit.

-ā, the original voc. ending was preserved in Homeric νύμφα and in Homeric masculines like ἄττα, πάππα, συβώτα, Att. δέσποτα, τοξότα, Πέρσα, and in O.Slav. rąko beside nom. rąka. In Greek and Goth. the nom. came to be used for the voc. already in the prehistoric period of these languages, probably owing to the fact that these two cases were alike in the plural in the parent Indg. language. The regular voc. would have been *gif in Gothic. As final Indg. -ā and -a regularly fell together in Lat. and Lith. it cannot be determined whether *equa*, rankà represent the original voc. or whether they are the nom. used for the vocative.

The -āv, -ην (§ 141) regularly corresponds to the acc. endings in Skr. áśvām, Lat. equam, Goth. giba, Lith. rañkā, O.Slav. rąką.

The -ās, -ās, -ῆs regularly corresponds to the gen. endings in Skr. áśvāyāḥ, O.Lat. familiās, fortunās, viās, &c., Goth. gibōs, Lith. rañkos; Arcad. γαῦ, ζαμίāν, οικίāν, &c., beside -ās, -ās, with -āv from the masc. ā-stems (§ 323).

The -ā, -ā, -ῆ = Indg. -āi and the dat. endings in Skr. áśvāyāi, Lat. equae, Goth. gibái, Lith. rañkai.

By contraction of the original case-endings with the stem-vowel, the dat. (-ā + ai) and loc. (-ā + i) fell together in -āi in the parent Indg. language (§ 79). The long diphthong -āi was shortened to -ai before consonants in prim. Greek (§ 63), as in μεσαι·πόλιος, Θηβαι·, παλαι·, χαμαι·γενής. In some dialects, e.g. the Arcadian, Boeotian, Elean, the -ai became generalized for the dat. and loc. (cp. § 325), whereas the other dialects, with the exception of a few isolated forms, generalized the antevocalic or pause form for both cases.

The original ending of the instrumental was -ā which was preserved in Vedic áśvā. In Greek the case-form disappeared except in adverbs like Att. πῆ, ταύτη, Dor. ταυτᾶ, Att. κρυφῆ, Dor. κρυφᾶ, Att. λάθρα, Ion. λάθρη, Lesb. ἀλλᾶ, ὅππᾶ.

Dual: The original ending of the nom. voc. and acc. was -ai as in Skr. áśvē = Indg. *ékwai. Some scholars assume that the Gr. nom. pl. represents the old dual form, but it is highly improbable that the old dual should have become used for the plural and that then a new dual was created. The ending -ā is doubtless a new formation because it does not correspond to the dual ending in any of the other Indg. languages. It must also have come into existence in late prehistoric Greek, otherwise it would have become -η in Ionic and partly also in Attic (§ 51). The nom. voc. and acc. dual of this declension does not occur in Homer except in a few masculines like Ἀτρείδᾶ, ὠκυπέτᾶ. It is probable that the ending -ā was an analogical formation due to the influence of the -ω of the ο-declension, cp. the similar new formations in the endings -αιν, -αι, -αις. The fact that the Gr. ο-declension contained both masculine and feminine nouns (§ 324) might have helped to bring about the new formations in the dual and in the nom. and dat. plural.

It is quite uncertain what were the original endings of the gen. dat. loc. abl. and instr. cases, as there is no agreement among the Aryan, Greek, Irish and Baltic-Slavonic languages which preserved the dual in historic times. The Greek gen. and dat. ending -αιν, -αιν was a new formation made after the analogy of -οιν, -οιν of the ο-declension.

Plural: The Indg. ending of the nom. and voc. pl. was -ās from older -ā+es, which regularly corresponds to the endings in Skr. áśvāḥ, Oscan scriptas, scriptae, Umbrian urtas, ortae, Goth. gibōs, Lith. rañkos. The Gr. nom.

pl. was remodelled after the analogy of the *-oi* of the o-declension, cp. the similar process in Lat. *equae* from older **equai* beside *equī* from older **equoi*.

-āns the original ending of the acc. corresponds to the endings in Att. Ion. Dor. *τιμᾶς*, Cret. *τιμάντις*, Lesb. *-αις* (§ 153), Lat. *equās*, Osc. *vias*, *vias*, Lith. *rankas*. *-āns* was shortened to *-ans* in the prehistoric period of these languages and then became *-ās* in Att. Ion. Dor. Lat. Osc. and Lith. through the intermediate stage of a long nasal vowel. This change of *-ans* to *-ās* was later than that of Indg. *ā* to *η* in Att. and Ion., otherwise we should have **τιμής* in these dialects. The *n* in *-ans* regularly disappeared in prim. Greek before consonants without lengthening of the preceding vowel, as in *Ἀθήνας* from **Ἀθάναν-*δ_εη, *θύρας* (§ 153). Some scholars regard *-ās* as the original ending of the acc. in order to account for Skr. *áśvāḥ*, Goth. *gibōs*, but it is far more reasonable to assume that the Skr. and Goth. forms are the nom. used for the acc. than to suppose that *-āns* was a new formation in the other languages with *n* from the o-, i- and u-declensions.

The original Indg. gen. ending was probably *-ām*, a contraction of older *ā + ōm*. Skr. *áśvā-nām* for **áśvām* was a new formation with *-nām* from the n-declension (§ 345). In prim. Greek and Italic the gen. was remodelled after the analogy of the pronominal declension, cp. the Homeric fem. gen. pl. *τάσων* from **τάσων* = Skr. *tāsām*, Lat. *is-tārum* = Indg. **tāsōm*, whence Hom. (Aeolic) *θεᾶσων*, Boeot. *-ᾶσων*, Ion. *-έων* from older *-ήων* (§ 72), Att. *-ῶν*, Dor. *-ᾶν*, Lesb. *-ᾶν* (§ 80). And similarly Lat. *equārum*, Osc. *-azum*, Umbrian *-arum* from **-āzōm* older **-āsōm*.

It is uncertain what was the ending of the loc. of this declension in the parent Indg. language. Skr. has *-āsu* (*áśvāsu*), Lith. *-osu* (*rañkosu*), and Gr. *-ᾶσι*, *-ησι*; *-ᾳσι*, *-ῃσι*; and *-αισι*, *-αις* (Hom. *-ης*). It is possible that the

original ending was *-āsu* and that it was changed to *-āsi* in early prim. Greek through the influence of the *-i* in the loc. singular (§ 305). This *-āsi* would regularly have become *-η* in Ion., *-η*, *-α* in Att. and *-α* in the other dialects (§ 213, 2), but no such endings have been preserved in the historic period of any of the dialects. After the law had ceased to operate whereby intervocalic *-σ-* disappeared, a new loc. was formed by adding *-σι* from the loc. of the consonantal stems direct to the stem, as in the inscriptional forms Ion. *δεσπόνησιν*, Att. *δίκησι*, *δραχμῆσι*, *ταμίāσι*, preserved later only in adverbial forms like *Ἄθήνησι*, *Θήβησι*, *θύρᾶσι*, *ἄρᾶσι*. It is generally assumed that the endings Ion. *-ησι*, Att. *-ησι*, *-ασι* were new formations after the analogy of *-οισι* of the o-declension, but it is also possible that they really represent double loc. endings formed by adding *-σι* to *-η*, *-α* (see above). The endings *-ησι*, *-ησι* (Att. also *-āσι*, *-ασι*) disappeared on Att. inscriptions after about 420 B. C. and on Ion. inscriptions after about the beginning of the fourth century B. C., and their place was taken by *-αις*. The endings *-αις* (Hom. *-ης*), *-αισι* were formed on analogy with the *-οις*, *-οισι* of the o-declension. Cp. the similar formation in Lat. *-is*, Osc. *-ais*.

b. jā-STEMS.

§ 322. In Greek the jā-stems only differ from the declension of the ā-stems in the nom. voc. and acc. singular. The suffix *-jā-* was chiefly used in the parent Indg. language to form feminine nouns and adjectives from the masculine of u- and consonant-stems, as *ἡδεῖα* from **σfādēFja* : *ἡδύς* = Skr. *svādví* : *svādūḥ*, *sweet*; *τέκταινα* from **τektaṇja*, older **τekτηja* : *τέκτων* = Skr. *takṣṇī* : *tákṣan-*, *carpenter*; *δότειρα* from **doterēja* : *dotýrō* = Skr. *dātrí* : *dātár-*, *giver*; *φέρουσα* from **fēronṭja* : *phéronṭ-* = Skr. *bhárantí* : *bhárant-*, *bearing*; and similarly *βαρεῖα*, *γλυκεῖα*, *πλατεῖα*;

δέσποινα, θεράπαινα, λέαινα, μέλαινα, τέρεινα; γενέτειρα, μοῖρα, πεῖρα, σφαιρα; δεικνύσα, διδοῦσα, τιθένσα, ἰστᾶσα, λύσασα, μοῦσα, πᾶσα, χαρίεσσα. Pf. part. act. πεφυνῖα from *πεφυνσja : πεφυώς = Skr. *babhūvúši* : *babhūvás-* for older *-vás-, *having been*; εἰδύνια, Hom. *iδυνια* : εἰδώς = Skr. *vidúši* : *vidvás-*, *knowing*. γλῶσσα from *γλωχja, δόξα from *δοκτja, θῆσσα from *θητja, ρίξα from *Fridja, φύξα from *φυγja, ἄμαξα, δίψα, θάλασσα, σχίξα. The j disappeared after a consonant + nasal (§ 130), as ἔχιδνα, μέριμνα, πτέρνα, τόλμα. Some scholars assume that these words had simply the ending -ə in prim. Indg., whilst others regard them as being new formations from original stems in -ā. πότνια : πόστις = Skr. *pátnī* : *pátiḥ*, *master, husband*; ψάλτρια, μία from *σμια.

The nom. sing. originally ended in -i beside -(i)jə. The reason for this difference is unknown. The various Indg. languages generalized one or other of the two forms in prehistoric times. The former occurs in Sanskrit, Gothic and Lithuanian, as Skr. *dēví*, *goddess*, *bṛhatí*, *great*, *svád-ví*, *sweet*; Goth. *mawi*, *girl*, *frijöndi*, *friend*; Lith. *vežanti*, *vehens*, and the latter in Greek. In prim. Greek -(i)jə regularly became -ja after short and -ia after long syllables, but this differentiation was greatly obscured at a later period owing to numerous analogical formations whereby forms with long syllables were remodelled on the analogy of those with short syllables and vice versa (§ 119).

It is uncertain what was the original ending of the vocative. In the Aryan branch it is -i, as Skr. *dévi*, *bṛhati*, *svádvi*, but in the other languages the nom. was used for the voc., as in Gr. *ἡδεῖα*, *πότνια*, Goth. *mawi*, *frijöndi*.

There is not sufficient agreement among the different branches of the Indg. languages to enable us to determine what was the original ending of the accusative. It was probably -(i)jām beside -(i)jəm, the former of which is represented by Goth. *máuja*, *frijöndja*, Lith. *vėžancz̄a*,

O.Slav. *vezaštā*, *vehentem*, and the latter by Gr. ἡδεῖαν, τέκταιναν, φέρουσαν, πότνιαν, &c. The Aryan ending *-im*, as in Skr. *dēvím*, *bṛhatím*, *svādím* would then be a new formation with *-í* from the nominative.

Gen. *-ης*, *-ᾶς* = Indg. *-(i)jās* and corresponding to the endings in Skr. *dēvyāḥ*, *svādyāḥ*, Goth. *máujōs*, *frijōndjōs*, Lith. *vežanczōs*.

Dat. *-η*, *-ᾳ* = Indg. *-(i)jāi* and corresponding to the endings in Skr. *dēvyāí*, *svādyāí*, Goth. *máujái*, *frijōndjái*, Lith. *věžanczai*.

c. MASCULINE ā-STEMS.

§ 323. As we have seen above (§ 320) the nouns belonging to this class were originally feminine abstract nouns which acquired a concrete meaning and then became masculine. In declension they only differ from the feminine ā-stems in the nom. voc. and gen. singular. The masculine nouns of this type were declined in Latin exactly like the feminine ā-stems. It is however possible that in the oldest Latin, as in Greek, the nominative took *-s* after the analogy of the o-declension, and that this ending is preserved in the two isolated O.Latin forms *hosticapas*, *hostium captor*; *paricidas*, *parricide*.

After the change of gender had taken place the nouns of this class took *-s* in the nom. after the analogy of the o-declension, as *νεᾶνίᾶς*, *πολίτης*, *Πέρσης*.

In the vocative two forms are to be distinguished, viz. *-α* and *-ᾶ*, *-η*. The former is the original voc. ending of ā-stems and occurs in nouns which have *-της* in the nominative, in names of peoples, and in compound nouns, as *πολῖτα*, *δέσποτα* beside nom. *δεσπότης*, *Σκύθα*, *Πέρσα*, *γεωμέτρα*; and the latter is the original nominative used for the vocative (§ 321) and generally occurs in all other nouns, as *νεᾶνίᾶ*, *Κρονίδη*. Forms like *ἰππότα* (*Νέστωρ*), *νεφεληγερέτα* (*Ζεύς*), *μητίετα* (*Ζεύς*), which are common in

epic poetry and occur almost exclusively in combination with proper names, are probably old vocatives which came to be used attributively as nominatives. And similarly it is probably more correct to regard the Boeot. nominatives *Νεστίδα*, *Πυθιονίκα*, &c. as vocatives which came to be used as nominatives than to assume that the original asigmatic nominative was preserved in this dialect. The genitive originally ended in -*ās*, as in the feminine *ā*-stems. To -*ās* was added -*o* from the old genitive (*λύκοο, λύκοι) of the o-declension. *-āso regularly became -*āo* in Boeot., Thess. and Hom. (*Ἄτρείδāo*), -*āv* in Arcad., Cypr., and Pamphylian, -*ēw* from older -*ηo* (§ 72), -*ō* in Ionic, -*ā* by contraction of -*āo* in Dor. (*Ἄτρείδā*), Lesb. and Elean. Att. πολίτοv, &c. had -*ov* direct from the o-declension. Boeot. -*ās* beside -*āo* was a new formation due to the influence of the nominatives in -*ā*, see the voc. above. Beside Ion. -*ēw*, -*ō* there also occurs -*ev* from older *-eo with -*o* for -*ō* re-introduced from *λύκοο.

NOTE.—In some dialects and especially in Ionic the accusative and genitive singular were often formed after the analogy of the masculine es-stems (§ 366) owing to the nominative singular being alike in both declensions.

2. THE O-DECLENSION.

§ 324. Greek and Latin are the only Indg. languages in which the o-declension contains masculine, feminine and neuter nouns. It is far more probable that a number of originally masculine nouns became feminine in these two languages than that the feminine was lost in the prehistoric period of all the other languages. The masculines and the feminines are declined alike in Greek and Latin.

§ 325. a. MASCULINE AND FEMININE O-STEMS.

Singular.

Indg.

Nom.	-os	λύκος
Voc.	-e	λύκε
Acc.	-om	λύκον
Gen.	-osjo, -so	λύκοιο, λύκου
Dat.	-ōi	λύκῳ, θεῷ
Loc.	{ -oi, -ei -ōi, -eī	οἴκοι, οἴκει 'Ισθμοῖ, ἐκεῖ

Dual.

Nom. Voc. Acc.	-ōu, -ō	λύκω
Gen. Dat.	-?	λύκουν, λύκοιν

Plural.

Nom. Voc.	-ōs	λύκοι
Acc.	-ons	λύκοντος, λύκουν
Gen.	-ōm	λύκων, θεῶν
Dat.	-ōis, -ōīs (instr.)	λύκοις, θεοῖς
Loc.	-oisu	λύκοιστι

Singular: The Indg. endings were remarkably well preserved in Greek. Nom. λύκος = Skr. वृक्षः, Lat. lupus, Goth. wulfs, Lith. vilkas, wolf. Voc. λύκε = Skr. वृक्षा, Lat. lupe, Goth. wulf, Lith. vilkė. Acc. λύκον = Skr. वृक्षम्, Lat. lupum, Lith. vilkā.

It is impossible to determine what was the original Indg. ending of the genitive. In the declension of all other stems the genitive and ablative were originally alike, but in the o-declension the form of these two cases seems to have been partly differentiated during the prim. Indg. period, whereby a special genitive form with pronominal ending was created, cp. Indg. *tosjo = τοῦ, Skr. तास्याः λύκοιο, Skr. वृक्षस्या, beside Indg. *toso = τοῦ, τῷ : prim. Gr. *πλύκοσο, whence Att. Ion. and mild Dor. λύκον,

Boeot. Lesb. and severe Dor. λύκω, Goth. *wulfis* with -is from *þis*, *of the*. The Greek, Aryan and Germanic languages accordingly have pronominal endings. What corresponds to the ablative in the other languages is used for the genitive and ablative in Baltic-Slavonic, as Lith. *vilko*, O.Slav. *vlüka*. The Latin ending -i, which must also have existed in prim. Keltic, is of unknown origin. -oio and -ov, the latter of which can often be read as -oo, exist side by side in Homer. The ending -oio was however archaic already in Homer, but through imitation of him it is found in the language of poets of all periods. In Thessalian the ending -oi occurs beside -ov, -ω, -oio. It is difficult to account for the -oi unless we may suppose that it arose from -oio by elision of -o. Some scholars regard it as the locative ending used for the genitive, and others as being of the same origin as the Latin genitive ending -i, but both these proposed explanations are very doubtful.

The Indg. ending of the dative was -ōi, from older -o + ai, corresponding to the endings in θεῷ, λύκῳ, Lat. *Iupō*, O.Lat. *populoi* *Romanoi*, *Numasioi*, *Numerio*, Lith. *vil-kui*, Skr. *vṛkāy-a* for older **vṛkāi*. -ōi was shortened to -oi before consonants in prim. Greek (§ 63). Anteconsonantal -oi then became generalized for the dative in Arcadian, Boeotian, Elean, Thessalian and the North-West group of dialects. The locative and dative thus fell together in these dialects (cp. § 321). On the other hand what is called the dative in these dialects may simply be the original locative used for the dative.

In the parent Indg. language the locative seems to have ended in -oi, -ei beside -ōi, -ēi. The former occur in *oīkoi*, *oīkei*, Lat. *bellī*, *domī*, *humī*, *Corinthī*, and Skr. *vṛkē*, and the latter in 'Ισθμοῦ and in adverbs like *ποῖ*, *whither*; *ἐκεῖ*, *there*; Dor. *τεῖ-δε*, *here*; *τηγεῖ*, *there*; *πεῖ*, *where*.

The original ending of the ablative was -ōd, -ēd, which was preserved in Skr. *vṛkād*, *vṛkāt*, O.Lat. inscriptions

Gnaivōd, meritōd, facilumēd = later Lat. Gnaeō, meritō, facillimē. This case-form disappeared in Greek except in a few isolated adverbial forms, as Delph. *Foίκω*, *domo*; Cret. *τῶ-δε*, *hinc*; Cret. *ὦ*, *ὅπω*, Locr. *ὦ*, *ὅπω*, *unde*. It probably also occurs in adverbs like *οὗτω*, *οὗτω-s*, *σοφῶ-s*. In the Germanic languages the old ablative of adjectives came to be used adverbially, as *sinteinō*, *continually*, nom. *sinteins*, *continual*.

The original ending of the instrumental was *-ō*, *-ē*, which is found in Vedic *vṛkā*, Goth. *wulfa* (used for the dative), Lith. *vilkū*. The case-form disappeared in Greek except in a few isolated adverbial forms, as *πώ-ποτε*, *οὕ-πω*, *ἄφνω*, *ἄμαρτῆ*, *ὅπη*, Laconian *πή-ποκα*, *usquam* or *unquam*.

Dual: The original ending of the nom. voc. and acc. was *-ōu* beside *-ō* (§ 69), the latter of which was generalized in Greek and Baltic-Slavonic, as *λύκω*, Lith. *vilkū*, O.Slav. *vl̥uka*. Both endings occur in Vedic *vṛkāu*, *vṛkā*, but only the former in classical Sanskrit.

It is impossible to determine what were the original endings of the gen. dat. loc. abl. and instrumental, as there is no agreement among the languages which preserved the dual in historic times (cp. § 321). Greek *-οιν*, *-οιν*, which came to be used in all kinds of stems except the *ā*-stems, has never been satisfactorily explained. The most probable explanation is that it arose from *-oi*, the original ending of the nom. voc. acc. neuter (§ 326), to which was added the dual pronominal ending *-iν* from *νῶiν*, *σφῶiν* = Att. *νῷν*, *σφῷν* (§§ 402, 404). It may possibly also have arisen from *-oi* + the ending *-σι(ν)* from the loc. plural of consonantal stems, but this would presuppose that *ν ἐφελκυστικόν* became a fixture in this form at a very early period. *-οιν* is the regular ending in Homer and *-οιν* in Attic.

Plural: The Indg. ending of the nom. and voc. was *-ōs* from older *-o+es*, which corresponds to the endings in Skr. *vṛkāḥ*, Goth. *wulfōs*, Osc. *Núvlanús*, *Nolani*. Greek,

Latin and Baltic-Slavonic have the pronominal ending. The Germanic languages also have it in the adjectives, cp. nom. *τοί*, Lat. *is-ti*, Goth. *þái*, O.Slav. *ti*, Skr. *té*, Indg. **toi*, *the* : *λύκοι*, Lat. *lupi*, O.Slav. *vlúci*, *wolves*; Goth. *blindái wulfōs*, *blind wolves*.

The original ending of the accusative was *-ons* which corresponds to the endings in Lat. *lupōs*, Goth. *wulfans*, Cret. *λύκος* beside *-os*, Att. Ion. and mild Dor. *-ovs*, Boeot. and severe Dor. *-ωs*, Lesb. *-oīs*, Arcadian and Thessalian *-os*. *-ovs* remained in prim. Greek in pause and when the next word began with a vowel, but became *-os* when the next word began with a consonant (§ 153). The different dialects mostly generalized one or other of the sandhi forms, as Att. Ion. *-ovs*, Boeot. *-ωs*, Lesb. *-oīs* from older *-ovs* through the intermediate stage of a long nasal vowel.

The Indg. ending of the genitive was *-ōm̄* which corresponds to the endings in *θεῶν*, *λύκων*, Skr. *výkāñ-ām* (with *-āñ-* from the *n*-stems), O.Lat. *Rōmānom*, *deum*, *modium*, classical Lat. *lupōrum* with pronominal ending, cp. *istōrum*, Osc. *Núvianúm*, *Nolanorum*, OE. *wulfa*, Lith. *vilkū* with regular loss of the final nasal in the last two languages.

θεoīs, *λύkoīs* and Lat. *lupīs* were originally the instrumental which came to be used for the dative. The Indg. ending of the instrumental was *-ōīs* corresponding to the endings in Skr. *výkāih*, Lith. *vilkaīs*. On the shortening of the long diphthong in Greek see § 63.

The original ending of the locative was probably *-oīsu* which corresponds to the ending in the Skr. loc. *výkēśu*. *-oīsu* may have become *-oisi* in prim. Greek through the influence of the *-i* in the loc. singular (§ 305), and then *-oisi* would have become **-oii* during the same period. *λύkoīsu* admits of a twofold explanation. Either the ending *-oīs* (see above) was changed to *-oīsu* through the influence of the *-σι* of the consonantal stems or else it was formed direct from the nom. pl. *λύkoī* with *-σι* from the consonantal

stems. In either case the *-οισι* must have come into existence after the law had ceased to operate whereby inter-vocalic *-σ-* disappeared (§ 213, 2). *-οισι* is the regular form in Homer (and then later imitated by other poets), Herodotus, Lesbian and O. Attic. Until 444 B.C. *-οισι* beside *-οις* was equally common on Attic inscriptions, but the longer form had disappeared by the end of the century. And in like manner *-οισι* beside *-οις* was common on Ionic inscriptions in the fifth century B.C., but the longer form had disappeared by about the beginning of the fourth century. *λύκοισι* like *λύκοις* was used for the dative.

b. NEUTER ο-STEMS.

§ 326. In Greek the declension of the neuter ο-stems only differs from the masculine in the nom. voc. singular and the nom. voc. and acc. plural.

The original ending of the nom. voc. and acc. singular was *-ομ* which corresponds to the endings in *ζυγόν*, Skr. *yugám*, Lat. *jugum*, *yoke*. The ending regularly disappeared in the Germanic languages, as Goth. *juk*, *yoke*.

The Indg. ending of the nom. voc. and acc. dual was *-οι* which occurs in Skr. *yugé*, and in *dvé*, Vedic *duvé* = OE. *twā*, *two*. In Greek the regular form would have been **ξυγοί* which was changed to *ξυγώ* after the analogy of the masculines.

What is called the nom. voc. and acc. plural was originally a feminine collective singular which accounts for the fact that in Greek and Sanskrit the nom. pl. neuter takes the verb in the singular. It also accounts for the double plurals like *δεσμοί*, *κύκλοι*, *στάδιοι* beside *δεσμά*, *κύκλα*, *στάδια*, Lat. *joci*, *loci* beside *joca*, *loca*, the former of which originally meant separate objects and the latter the objects taken collectively. The original ending was *-ā* which corresponds to the endings in Vedic *yugā* beside classical Skr. *yugá-ni* with *-ni* from the n-stems, Lat. *juga*,

Goth. *juka* with regular shortening of the final vowel in these two languages. *ζυγά* was formed after the analogy of the consonantal stems. This new formation must have taken place in prim. Greek, otherwise we should have had the regular ending *-ή in Attic and Ionic, and *-ά in the other dialects.

§ 327. The so-called Attic declension had in prim. Greek the same case-endings as the ordinary ο-declension. The prim. Greek forms of a noun like *νεώς* (Dor. *νᾶός*, Ion. *νηός*) were: sing. **νᾶος*, **νᾶον*, **νᾶοο*, **νᾶωι*; dual **νᾶω*, **νᾶοιν*; pl. **νᾶοι*, **νᾶονς*, **νᾶων*, **νᾶωις*, which with the regular change of -ᾱ- to -η- (§ 51) together with shortening (§ 71) and quantitative metathesis (§ 72) became in Attic *νεώς*, *νεών* (sometimes also *νεώ* after the analogy of *ἥρω* from **ἥρωα*, see § 340), *νεώ* or *νεῶ* from **νεωο* older **νηοο*, *νεῷ*; *νεώ*, *νεών*; *νεώ*, *νεώς*, *νεῶν*, *νεώς*.

3. THE Ī-DECLENSION.

§ 328. a. MASCULINE AND FEMININE SHORT ī-STEMS.

	Indg.	<i>Singular.</i>
Nom.	-is	<i>πόλις</i>
Voc.	-i, -ei or -oi	<i>πόλι</i>
Acc.	-im	<i>πόλιν</i>
Gen.	-eis, -oīs	<i>πόλεως, πόληος, πόλεος, πόλιος</i>
Dat.	-ēi (loc.), -ei (loc.)	<i>πόλει, πόλεῃ, πόληῃ, πόλι</i> (loc.)
		<i>Dual.</i>
Nom. Voc. Acc.	-ī	<i>πόλεε, πόλει</i>
Gen. Dat.	?	<i>πολέοιν</i>
		<i>Plural.</i>
Nom. Voc.	-ejes	<i>πόλεις, πόλιες, πόληες</i>
Acc.	-ins	<i>πόλεις, πόλιας, πόληας, πόλιτς, πόλινς</i>
Gen.	(i)jōm̥	<i>πόλεων, πολίων</i>
Dat.	-isu (loc.)	<i>πόλεσι, πόλισι, πολίεσσι</i>

In the original Indg. declension the stem-forms contained various grades of ablaut nearly all of which disappeared in Greek owing to various new formations in several of the cases.

Singular : The Greek nominative ending corresponds to the endings in the other languages, as Skr. *agnih*, *fire*; Skr. *ávih*, *oīs*, Lat. *ovis*, Lith. *avīs*, *sheep*; Goth. *ansts*, *favour*.

The original ending of the vocative was *-i* when the preceding syllable had the chief accent of the word, and *-ei* or *-oi* when the accent was on the ending. Greek and the Germanic languages generalized the former and Sanskrit the latter form, as *πόλι*, Goth. *anst*, beside Skr. *agné*. In Latin the nom. was used for the vocative.

-u from Indg. *-im* (§ 141) corresponds to the accusative endings in Skr. *agním*, *ávím*, Lat. *sitim*, *partim*. Forms like Lat. *ovem*, *hostem* were new formations with *-em* from the acc. of the consonantal stems. The ending *-im* regularly disappeared in Gothic, as *anst*.

The endings in Skr. *agnéh*, Goth. *anstáis*, Lith. *naktēs* (nom. *naktis*, *night*) were regularly developed from the original endings of the genitive, which disappeared entirely in Greek and their place was taken by various new formations after the analogy of the *u*- and *i*-declensions. *πόλιος*, which occurs in all the dialects except Attic, had *-ios* from forms like *κιός* (§ 380). Att. *πόλεος* from **πόλεfos* with *-ef-* from the *u*-declension. Hom. *πόληος* with *-η-* from the dative. Attic *πόλεως* from older **ποληος* by quantitative metathesis (§ 72). Lat. *ovis*, *partis*, *hostis* had *-is* from the genitive of the consonantal stems.

The original locative ending *-ēi* became *ái* in Gothic, as *anstái*. The *-i* in Lat. *ovi*, *hosti* can represent both Indg. *-ēi* and *-ei*. All the Greek forms were new formations. Att. and Hom. *πόλεi*, Hom. *πόλεi* from **πόλεji* with *-i* from the dative of the consonantal stems in all the

Greek forms of the dative., Hom. and Att. (inscriptions 410–335 B.C.) *πόληι* is difficult to explain. Two solutions of the difficulty have been proposed, but neither of them is quite satisfactory. Some scholars assume that a locative ending -ē existed beside -ēi in the parent Indg. language (cp. § 63), and that the former occurs in the Vedic locative *agnā* beside *agnāu* (a new formation after the analogy of the u-declension) and in Greek *πόλη + i* with -i from the dative of the consonantal stems. If this explanation is right *πόληi* must have been formed in fairly late prehistoric Greek, otherwise it would not have remained trisyllabic. Others assume that *πόληi* stands for an older **πόληf + i* with -f- from the u-declension like the -āu in *agnāu*, but no trace of -f- exists in any of the dialects (§ 331). Ion. Cret. Boeot. Lesb., &c. *πόλī* from **πολii*.

Dual: The nom. voc. and acc. originally ended in -i, as in Skr. *agní*. *πόλεε*, *πόλει* were from **πόλεjē* with -ej- from the nom. plural and -e from the dual of the consonantal stems. On the ending -ou in the genitive and dative see § 325.

Plural: The endings in *πόλεις*, Skr. *agnáyah*, Lat. *ovēs*, *hostēs*, Goth. *ansteis* were all regularly developed from the Indg. nominative ending -ejes. Ion. Cret., &c. *πόλιες* was from forms like *κίες*, Hom. *πόληes* had the same -η- as in *πόληi*.

The original ending of the accusative was preserved in Cret. *πόλιas* and Goth. *anstins*. Ion. *πόλīs* like Lat. *ovīs*, *turrīs* had regular loss of the nasal and lengthening of the preceding vowel (§ 69, 1). Lat. *ovēs*, *hostēs* may be either the nom. used for the acc. or else have -ēs from the acc. of the consonantal stems. Att. Ion. *πόλεis* was the nom. used for the accusative. Hom. Dor. and Lesb. *πόλιas* had -ias from forms like *κίαs*. Hom. *πόληas* (see *πόληi*) with -as from *κίαs*.

The endings in *τριῶν*, Lat. *trium*, Ion. Dor. and Lesb.

πολίων, Lat. *ovium*, *hostium* correspond to the original Indg. genitive ending *-(i)jōṁ*. Att. *πόλεων* had *-e-* from the nominative.

The original locative ending was preserved in Skr. *triśū*, *tribus*, *agniśu*. *τρισί*, Ion. *πόλισι* had *-σι* from the dat. of the consonantal stems, and similarly *πόλεσι* but with *-e-* from the nominative. Hom. *πολίεσσι* had *-εσσι* from the dat. of the s-stems (§ 364). *πολέοις* in the North-West group of dialects was a new formation after the analogy of the dative of the o-declension.

b. NEUTER SHORT ī-STEMS.

§ 329. In Greek the declension of the neuters only differed from the masculines and feminines in the nom. and acc. singular, and the nom. voc. and acc. plural. The nom. voc. and acc. singular originally ended in *-i* which was preserved in Skr. *vāri*, *water*, *īḍpi*, but became *-e* in Latin, as *mare*, *leve*. The nom. voc. and acc. plural originally ended in *-i* which was preserved in Vedic *trí*, *tria*. *τρία*, *īḍriā* had *-a* from the plural of the consonantal stems, whereas Lat. *tria*, Goth. *þrija*, *three* were new formations after the analogy of the o-declension.

c. THE LONG ī-STEMS.

§ 330. The long ī-stems originally contained mono-syllabic nouns like Skr. *dhíḥ*, *thought*, *kīś*, *λίς*, *īś*, Lat. *vīs*, and nouns of more than one syllable like Vedic *nadīḥ*, *river*. The latter class of nouns went over into the consonantal declension in prim. Greek (§ 343).

	Indg.	Singular.		
Nom.	<i>-īs</i>	<i>kīś</i>	<i>dhíḥ</i>	<i>nadīḥ</i>
Voc.	<i>-i</i> , <i>-ī</i>	<i>kīś</i>	<i>dhíḥ</i>	<i>nádi</i>
Acc.	<i>-ijm</i> , <i>-im</i>	<i>kīv</i>	<i>dhíyam</i>	<i>nadíyam</i>
Gen.	<i>-ijos</i>	<i>kīś</i>	<i>dhiyáḥ</i>	<i>nadíyah</i>
Dat.	<i>-iji</i> (= loc.)	<i>kī'</i>	<i>dhiyí</i>	<i>(nadiyām)</i>

Dual.

Nom. Voc. Acc.	<i>-ije</i>	<i>κίε</i>
Gen. Dat.	?	<i>κιοῦν</i>

Plural.

Nom. Voc.	<i>-ijes</i>	<i>κίες</i>	<i>dhíyah</i>	<i>nadíyah</i>
Acc.	<i>-ijęs</i>	<i>κίας</i>	<i>dhíyah</i>	<i>nadíyah</i>
Gen.	<i>-ijōm</i>	<i>κιῶν</i>	<i>dhiyám</i>	(<i>nadínām</i>)
Dat.	<i>-isu</i> (=loc.)	<i>κισί</i>	<i>dhišú</i>	<i>nadíšu</i>

-ij- = Skr. *-iy-* alternated with *-i-*. The former was regular before vowels and the latter before consonants. In Greek the *-ij-* regularly became *-i-*. (§ 128).

All the Greek forms, except the voc. singular, gen. and dat. dual, and dat. plural, were regularly developed from the original Indg. forms. The nom. was used for the voc. in Greek and in Skr. *dhíh*. The regular ending of the acc. singular would have been **-iya* in Skr. (§ 65, 1), but *-m*, which originally belonged only to the *ā*-, *o*-, *i*- and *u*-declensions, was extended to the masc. and fem. acc. sing. of all declensions. Acc. *īva* for **īv*, *vim*, with *-a* added from the acc. of the consonantal stems. From *īva* was then formed a new gen. *īvós*, pl. *īves*, cp. the similar new formations in *Zῆνα* : *Zῆν* (§ 337), *tíva* : **tív*. The gen. and dat. dual *κιοῦν* from **κιοῦν* had *-ou* from the *o*-declension. The dat. plural *κισί* had *-i* from the other cases of the plural and *-σι* from the dat. of the consonantal stems.

4. THE Ū-DECLENSION.

§ 331. a. MASCULINE AND FEMININE SHORT ū-STEMS.

Indg. *Singular.*

Nom.	<i>-us</i>	<i>πῆχυς</i>	<i>ἡδύς</i>
Voc.	<i>-u</i> , <i>.eu</i> or <i>.ou</i>	<i>πῆχυ</i>	<i>ἡδύ</i>
Acc.	<i>-um</i>	<i>πῆχυν</i>	<i>ἡδύν</i>
Gen.	<i>-eūs</i> , <i>-oūs</i>	<i>πήχεως</i> , <i>πήχεος</i>	<i>ἡδέος</i>
Dat.	<i>-ēu</i> (loc.), <i>.eu</i> (loc.)	<i>πήχει</i> , <i>πήχεῖ</i>	<i>ἡδεῖ</i> , <i>ἡδέῖ</i>

Dual.

Nom. Voc. Acc.	-ū	$\pi\bar{\eta}\chi\epsilon\epsilon$, $\pi\bar{\eta}\chi\epsilon i$	$\dot{\eta}\delta\epsilon\epsilon$, $\dot{\eta}\delta\epsilon i$
Gen. Dat.	?	$\pi\eta\chi\acute{e}ou$	$\dot{\eta}\delta\acute{e}ou$

Plural.

Nom. Voc.	-ewes	$\pi\bar{\eta}\chi\epsilon i s$, $\pi\bar{\eta}\chi\epsilon e s$	$\dot{\eta}\delta\acute{e}is$, $\dot{\eta}\delta\acute{e}es$
Acc.	-uns	$\pi\bar{\eta}\chi\epsilon i s$, $\pi\bar{\eta}\chi\epsilon e a s$	$\dot{\eta}\delta\acute{e}is$
Gen.	(-u)wōm̄	$\pi\bar{\eta}\chi\epsilon o w n$	$\dot{\eta}\delta\acute{e}o w n$
Dat.	-usu (= loc.)	$\pi\bar{\eta}\chi\epsilon e s t i$	$\dot{\eta}\delta\acute{e}e s t i$

The stem-forms of the u- like the i-declension originally contained various grades of ablaut nearly all of which disappeared in Greek owing to various new formations in several of the cases.

Singular: The Greek nominative ending corresponds to the endings in the other languages, as Skr. sūnūḥ, Goth. sunus, Lith. sūnūs, son, Lat. fructus, manus.

The original ending of the vocative was -u when the preceding syllable had the chief accent of the word and -eu or -ou when the accent was on the ending. Greek and the Germanic languages generalized the former and Sanskrit and Lithuanian the latter, as $\pi\bar{\eta}\chi u$, $\dot{\eta}\delta u$, Goth. sunu, beside Skr. sūnō, Lith. sūnaū. In Latin the nom. was used for the vocative.

-vv from Indg. -um (§ 141) corresponds to the accusative endings in Skr. sūnūm, Lat. fructum, Lith. sūny, Goth. sunu with regular loss of the -m. Hom. εὐρέα for εὐρύν was formed after the analogy of the acc. plural.

The endings in Skr. sūnōḥ, Goth. sunáus, Lith. sūnaūs, Lat. fructūs were regularly developed from the original endings of the genitive, which disappeared entirely in Greek and their place was taken by new formations. The ending in $\pi\bar{\eta}\chi e \omega s$, which only occurs in the nouns, was formed after the analogy of πόλεως of the i-declension. The cause of the new formation was probably due to the fact that in Greek the endings of the dat. sing. -e(j)i, -e(f)i

and nom. pl. $-\epsilon(j)\epsilon s$, $-\epsilon(F)\epsilon s$ fell together in these two declensions. $\dot{\eta}\delta\acute{e}os$, Hom. $\pi\acute{y}\chi\epsilon os$, older $*-\epsilon Fos$ with $-\epsilon F-$ from the dative.

The endings in Skr. $s\bar{u}n\acute{a}u$, Goth. $sun\acute{a}u$ were regularly developed from the original locative ending $\cdot\bar{e}u$. The \bar{u} in Lat. $fruct\bar{u}$ can represent both $\cdot\bar{e}u$ and $\cdot eu$. The Gr. endings $-\epsilon i$, $-\epsilon \ddot{i}$ are from older $*-\epsilon Fi$ with $-\iota$ from the dative of the consonantal stems, cp. the similar new formation in Vedic $s\bar{u}n\acute{a}vi$ beside $s\bar{u}n\acute{a}u$.

Dual: The original ending of the nom. voc. and acc. was preserved in Skr. $s\bar{u}n\bar{u}$. $\pi\acute{y}\chi\epsilon \epsilon$, $\pi\acute{y}\chi\epsilon \iota$ was from older $*-\epsilon F\epsilon$ with $-\epsilon F-$ from the nom. plural and $-\epsilon$ from the dual of the consonantal stems. On the ending $-oiv$ in the gen. and dat. see § 325.

Plural: The endings in Att. $\pi\acute{y}\chi\epsilon is$, Ion. $\pi\acute{y}\chi\epsilon \epsilon s$, and Skr. $s\bar{u}n\acute{a}vah$ were regularly developed from the Indg. nominative ending $\cdot ewes$. Lat. $fruct\bar{u}s$ was the acc. used for the nominative.

The original ending of the accusative was preserved in Cret. $v\bar{l}\bar{u}v\bar{s}$, *sons* and Goth. $sununs$. $\pi\acute{y}\chi\epsilon is$, $\dot{\eta}\delta\acute{e}is$ were the nom. used for the accusative. Ion. $\pi\acute{y}\chi\epsilon as$, $\epsilon\nu\rho\acute{e}as$ were new formations after the analogy of the \bar{u} -stems (§ 334). Lat. $fruct\bar{u}s$ was from older $*fructuns$ with regular loss of the $-n-$ and lengthening of the preceding vowel.

$\pi\acute{y}\chi\epsilon \omega v$ from older $*\pi\eta\chi\epsilon F\omega v$ was a new formation with $-\epsilon F-$ from the nom. plural. The normal development of the original genitive ending occurs in Lat. $fructuom$, $-uum$, $-um$.

The original ending of the locative was preserved in Skr. $s\bar{u}n\acute{u}shu$. $\pi\acute{y}\chi\epsilon \sigma i$, $\dot{\eta}\delta\acute{e}\sigma i$ for older $*-u\sigma i$ with $-\epsilon$ from the nom. plural and $-\sigma i$ from the dative of the consonantal stems. The Hom. ending $-\epsilon \sigma \sigma i$ was from the s -stems (§ 334).

§ 332. In the declension of the word for *son* two stems

are to be taken into consideration, viz. prim. Greek **sūijos* = *víos* which was declined like an ordinary o-stem (§ 325); and prim. Greek **sūijus* = *víús*, Cret. *víús*, acc. Arcadian *víúv*, Cret. *víúv*, acc. pl. Cret. *víúv̄s*. The remaining cases of the singular, dual and plural were formed from the generalized stem form *víef-*, as *víeos*, *víeī* (*víeī*); *víée*, *víéou*; *víeīs* (*víeēs*), *víéων*, *víéσι*. The Hom. accusatives *víea*, *víeas* were new formations after the analogy of the consonantal stems. At a later stage *ví-* came to be regarded as the stem-form, from which was made a new declension after the analogy of the inflected forms of *πατήρ* (§ 360), as **víſ*, *vía*, *víos*, *víi*; *víε*; *víes*, *vías*, **víōν*, *víāσι*.

b. NEUTER SHORT ū-STEMS.

§ 333. In Greek the declension of the neuters only differed from the masculines and feminines in the nom. and acc. singular, and the nom. voc. and acc. plural. The nom. voc. and acc. singular originally ended in -*u* which was preserved in Skr. *mádhū*, *mead*; Skr. *pášu* = Goth. *faíhu*, *cattle*; *āστu*, *ηðu*. The origin of the ending in Lat. *cornū*, *genū*, *pecū* is obscure. The nom. voc. and acc. plural originally ended in -*ū* which was preserved in Vedic *purū*, *much, many*; *mádhū*, beside *purūṇi*, *mádhūṇi*. Lat. *cornua*, *genua* was a new formation after the analogy of the o-declension. In Greek the nouns and adjectives differed in the formation of the nom. plural. The former had -*η*, as *āστη*, from older *-εσα, the ending of the neuter s-stems (§ 364), and the latter had -*εα*, as *ηðέα*, from older *-εfα with -*ef-* from the masc. and fem. nom. plural, and -*α* from the nom. plural of consonantal stems.

c. THE LONG ū-STEMS.

§ 334. The long ū-stems contain monosyllabic nouns like *σῦς*, *ῦς*, Lat. *sūs*, OE. *sū*, *pig, sow*; and *μῦς* which

originally belonged to the s-declension; Skr. *bhūḥ*, *earth*; and nouns of more than one syllable like *iχθύs*, *iθύs*; Vedic *tanúḥ*, *body*.

Indg.	<i>Singular.</i>			
Nom. -ūs	<i>σūs</i>	<i>bhūḥ</i>	<i>iχθύs</i>	<i>tanúḥ</i>
Voc. -u, -ū	<i>σū</i>	<i>bhūḥ</i>	<i>iχθύ</i>	<i>tánu</i>
Acc. -uw <small>ṁ</small> ,	<i>σūv</i>	<i>bhúvam</i>	<i>iχθύv</i>	<i>tanúvam</i>
-ūm				
Gen. -uwos	<i>σuós</i>	<i>bhuváḥ</i>	<i>iχθúos</i>	<i>tanúvah</i>
Dat. -uwi (=loc.)	<i>σúi</i>	<i>bhuví</i>	<i>iχθúi</i>	<i>tanúvi</i>
<i>Dual.</i>				
Nom. Voc. Acc. -uwe	<i>σúe</i>		<i>iχθúe</i>	
Gen. Dat. ?	<i>σuōv</i>		<i>iχθúov</i>	
<i>Plural.</i>				
Nom. Voc. -uwes	<i>σúes</i>	<i>bhúvah</i>	<i>iχθúes</i>	<i>tanúvah</i>
Acc. -uw <small>ns</small>	<i>σúas</i>	<i>bhúvah</i>	<i>iχθúas</i>	<i>tanúvah</i>
Gen. -uw <small>ṁ</small>	<i>σuāv</i>	<i>bhuvám</i>	<i>iχθúav</i>	<i>(tanúvām)</i>
Dat. -ūsu (=loc.)	<i>σuσí</i>	<i>bhūšú</i>	<i>iχθúσi</i>	<i>tanúšu</i>

-uw- = -vf-, Skr. -uv- alternated with -ū-. The former was regular before vowels and the latter before consonants. In Greek the -vf- regularly became -v- (§ 119).

All the Greek forms except the gen. and dat. dual, and the dat. plural were regularly developed from the original Indg. forms. *σuōv*, *iχθúov* from **σufoīv*, **iχθúfouv* had *oīv* from the o-declension. *σuσí*, *iχθúσi* had *v* for *ū* from the other cases of the plural and -σi from the dative of the consonantal stems. Hom. *σuéσσi* with -εσσi from the s-stems. In the Sanskrit monosyllabic nouns the nom. was used for the vocative. Beside the regular acc. sing. *iχθύv* there also occurs in later Greek *iχθύa* formed after the analogy of the acc. plural. On the ending in Sanskrit *bhúvam*, *tanúvam*, see § 330. Beside the regular acc. pl. *σúas*, *iχθúas* there also occurs in Attic and Ionic *σūs*,

ἰχθύς from older *-υνς* which was formed after the analogy of the acc. singular. This new formation was also occasionally used for the nominative. For nouns which have *-υ-* throughout all cases see §§ 265–6.

5. THE DIPHTHONGAL DECLENSION.

§ 335. This declension contains monosyllabic nouns and nouns of more than one syllable. It is subdivided into four categories according as the stem ends in *-āu-*, *-ēu-*, *-ōu-* or *-ōi-*. The stem-forms of each category originally contained various grades of ablaut, but in Greek as in the other Indg. languages one or other of the stem-forms was generally extended to all the cases by levelling.

a. āu-STEMS.

§ 336.

Singular.

Indg.

Nom. Voc.	*náus	<i>ναῦς, νηῦς</i>
Acc.	*náwm̥	<i>ναῦν, νῆα, νέα</i>
Gen.	*náwós	<i>νεώς, νηός, νέός, νᾶός</i>
Dat. (=loc.)	*náwi	<i>νη̄τ, νᾶτ</i>

Dual.

Nom. Voc. Acc.	*náwe	<i>νῆε</i>
Gen. Dat.	?	<i>νεοῖν</i>

Plural.

Nom. Voc.	*náwes	<i>νῆες, νέες, νᾶες</i>
Acc.	*náwns	<i>ναῦν, νῆας, νέας, νᾶας</i>
Gen.	*náwóṁ	<i>νεῶν, νηῶν, νᾶῶν</i>
Dat. (=loc.)	*náusú	<i>ναυσί, νησί, νήεσσι, νέεσσι, νᾶεσσι</i>

-āw- = prim. Gr. *-āf-*, Skr. and Lat. *-āv-* regularly alternated with *-āu-*. The former occurred before vowels and the latter before consonants. The *āu*-stems seem to have levelled out the *-ā-* of *-āw-*, *-āu-* already in the parent

Indg. language. Intervocalic *-f-* regularly disappeared in Greek (§ 122). The *-e-* in forms like *νέα*, *νέός*, *νέας*, &c. which occur in Homer and Herodotus was due to the shortening of older *-η-* before the following vowel (§ 71).

Singular: In the nominative *ναῦς* the first element of the diphthong was shortened in prim. Greek (§ 68), cp. Skr. *nāuh*, Lat. *nāvis* with the ending of the i-declension in all its cases. The *η* in Hom. *νῆδς* and also in the dat. pl. *νηνσί* was due to levelling out the *η* of the other cases where it was regular.

The accusative form *ναῦν* was a new formation from the nominative. Hom. *νῆα* from older **νῆfa*, **νᾶfa* corresponds to Indg. **nāwṁ*, Skr. *nāvam* (see § 330), Lat. *nāvem*.

The original genitive **nāwós* corresponds to Dor. *νᾶός*, Ion. *νῆός* and Att. *νεώς* with quantitative metathesis (§ 72), Skr. *nāváh*, Lat. *nāvis*.

The dative Dor. *νᾶτ*, Lesb. *νᾶτι*, Att. Ion. *νῆτι* were all from prim. Greek **νᾶfí* = Indg. **nāwí*, Skr. *nāví*, cp. Lat. *nāvī*.

Dual: Nom. voc. and acc. *νῆε* from prim. Greek *νᾶfe* = Indg. **nāwe*, Skr. *nāvāu* probably had its ending from the u-declension. Gen. dat. *νεοῦν* from older **νηfoūn*, **νᾶfoūn* (§ 325), see *νέα*, &c. above.

Plural: The nominative Dor. *νᾶες*, Att. Ion. *νῆες* were from prim. Greek **νᾶfes* = Indg. **nāwes*, Skr. *nāvah*, Lat. *nāvēs*.

The Attic accusative *ναῦς* was a new formation after the analogy of the accusative singular. Dor. *νᾶas*, Ion. *νῆas* = prim. Greek **νᾶfas*, Skr. *nāvah*, Lat. *nāvēs*.

The Att. Ion. genitive *νεῶν* was from older *νηῶν* with shortening of *η* to *ε* (§ 71). Dor. *νᾶῶν*, Hom. *νηῶν* from prim. Greek **νᾶfῶν* = Indg. **nāwōm*, Skr. *nāvām*, Lat. *nāvium*.

The dative **νᾶνσί* was shortened to *νανσί* in prim. Greek (§ 68), cp. the nom. singular, Ion. *νηνσί* like *νῆς* had *η*

from the other cases. The ending *-σι* was from the dat. of the consonantal stems. Dor. *νάεσσι*, Hom. *νήεσσι* with *-εσσι* from the s-stems.

b. ēu-STEMS.

§ 337. Some of the original ablaut-grades were preserved in the declension of *Zeús*; Skr. *dyáuh*, *sky, day*, Lat. *diēs*, Jov., viz. *djēu-* in *Zeús*, Skr. *dyáuh*, Lat. *diēs*, and O.Lat. *Diēspiter*; *djeu-* in *Zeū*, Lat. *Jū-piter*, Jov.; and *diw-* in *Διός*, Skr. *diváh*.

	Indg.			
Nom.	*djéus	<i>Zeús</i>	<i>dyáuh</i>	(<i>diēs</i>)
Voc.	*djéu	<i>Zeū</i>	(<i>dyáuh</i>)	<i>Jū-piter</i>
Acc.	*djé(u)m	<i>Zῆν</i>	<i>dyám</i>	<i>diem, (Jovem)</i>
Gen.	*diwós	<i>Διός</i>	<i>diváh</i>	(<i>Jovis</i>)
Dat. (=loc.)	*djéwi	<i>Διᾶ, Δι</i>	<i>dyávi</i>	<i>Jove</i>

The nominative *Zeús* was regularly developed from the original form *djéus (§§ 63, 129, 8). Latin *diēs* was a new formation from the acc. before *diēm was shortened to *diem*.

Zeū corresponds to the original vocative *djéu and to the *Jū-* in *Jūpiter* = *Zeū πάτερ*. *Jūpiter* then came to be used as a nominative.

The accusative *Zῆν* corresponds to Vedic *dyám*, Lat. *diem*, Indg. *djé(u)m (§ 63). From *Zῆν* a new acc. *Zῆνα* was formed with *-α* from the acc. of consonantal stems. From *Zῆνα* was then formed a new gen. *Zηνός*, dat. *Zηνί*.

Διᾶ from *Διfā, like classical Skr. *dívam* beside Vedic *dyám*, was a new formation from the gen. with *-α* from the acc. of consonantal stems. And similarly Lat. *Jovem*, gen. *Jovis* were formed after the analogy of *Jove*.

The genitive *Διός* from *Διfós, Skr. *diváh* was regularly developed from the original form *diwós.

The dative *Διτ*, *Δι* from **Διφि*, like classical Skr. *diví* beside Vedic *dyávi* = Lat. *Jove*, was formed after the analogy of the genitive.

§ 338. In the declension of *βασιλεύς* and similar words the ablaut-grade *-ēu-* originally belonged only to the stem of the nom. singular. The *-ēu-* (= *-ēw-* before vowels) was in prim. Greek levelled out into all the cases except the voc. singular which retained the old ablaut-grade *-eu-*. To this declension belonged also the Hom. proper names like *Ἄτρεύς*, *Πηλεύς* which generalized the ablaut-grade *-eu-* (= *-ew-* before vowels) in the oblique cases, as voc. *-ēū*, acc. *-έ(f)α*, gen. *-έ(f)ος*, dat. *-έ(f)ι*. The nom. ending *-έus* was a shortening of older **-ήύs* (§ 68).

Singular.

Prim. Greek.

Nom.	<i>-ηνς</i>	<i>βασιλεύς</i>
Voc.	<i>-εν</i>	<i>βασιλεῦ</i>
Acc.	<i>-ηγα</i>	<i>βασιλέᾶ, βασιλῆα, βασιλέα</i>
Gen.	<i>-ηγος</i>	<i>βασιλέως, βασιλῆος, βασιλέος</i>
Dat.	<i>-ηγι</i>	<i>βασιλεῖ, βασιλῆι, βασιλέῃ</i>

Dual.

Nom. Voc. Acc.	<i>-ηγε</i>	<i>βασιλέε, βασιλῆε</i>
Gen. Dat.	<i>-ηγοιν</i>	<i>βασιλέοιν</i>

Plural.

Nom. Voc.	<i>-ηγες</i>	<i>βασιλέῖς, βασιλῆς, βασιλῆες, βασιλέες</i>
Acc.	<i>-ηγες</i>	<i>βασιλέᾶς, βασιλῆας, βασιλέας</i>
Gen.	<i>-ηγων</i>	<i>βασιλέων, βασιλῆων</i>
Dat.	<i>-ηγσι</i>	<i>βασιλεῦσι</i>

In the nom. singular and dat. plural the *-ην-* was shortened to *-εν-* in prim. Greek. In the Arcadian and Cyprian dialects a new nom. singular in *-ης* was formed with *-η-*

from the gen. and dative. The endings *-ηϝα*, *-ηϝος*, *-ηϝας* regularly became *-εᾶ*, *-εως*, *-εᾶς* in Attic by loss of *-ϝ-* and quantitative metathesis (§ 72). The *-ε-* in the Ionic and Doric endings *-εα*, *-εος*, *-εῖ*, *-εες*, *-εας* was due to the shortening of *-η-* before the following vowel (§ 71); and similarly in the Attic endings *-εῖ*, *-εε* (nom. dual), *-εοιν*, *-εων*. The forms with *-η-* belong to the Hom. Cypr. Lesb. and Boeotian (written *-εῖ* in Boeot.) dialects. *-ῆς* contracted from *-ηες* (on inscriptions) was the regular ending of the nom. plural in Attic until after the middle of the fourth century B.C. At about this time a new nom. ending *-εῖς* was formed after the analogy of the nom. of the u-declension owing to the gen. plural being alike in both declensions. From about the end of the fourth century *βασιλεῖς* came to be used also for the accusative. The older nom. *βασιλῆς* was used for the accusative at a much earlier period. See § 268.

c. ōu-STEMS.

§ 339. In the original declension of the word for *cow*, *ox* the stem-forms had the three ablaut-grades *gōu*, *gou-* (= *gow-* before vowels) and *gu-*. The form *gu-* does not occur in the declension of **gōeus* (§ 205) in any of the languages. It is therefore probable that it disappeared already in the parent Indg. language and that its place was taken by the stem-form *gou-* in the gen. singular, gen. and dat. dual, and in the gen. and loc. plural. In writing down the hypothetical Indg. forms the accent has been omitted in the gen. and dat. of the singular and plural, because of the difference in the accentuation of the Greek and Sanskrit forms. The Greek doubtless represents the original accentuation except in the dat. singular.

*Singular.**Indg.*

Nom.	*góus	$\beta o\bar{v}s$, $\beta \bar{w}s$	gáuh	bōs
Voc.	*góu	$\beta o\bar{v}$	(gáuh)	(bōs)
Acc.	*gō(u)m	$\beta o\bar{v}n$, $\beta \bar{w}n$	gám	(bovem)
Gen.	*gowos	$\beta o\bar{v}\bar{s}$	(góh)	bovis
Dat. (=loc.)	*gowi	$\beta o\bar{v}\bar{i}$	gávi	bove

Dual.

Nom. Voc. Acc.	*gówe	$\beta \acute{o}\epsilon$	gávāu
Gen. Dat.	?	$\beta oo\bar{v}n$	

Plural.

Nom. Voc.	*gówes	$\beta \acute{o}\epsilon s$	gávah	bōvēs
Acc.	*gówñs	$\beta o\bar{v}s$, $\beta \acute{o}\alpha s$,	(gáh)	bōvēs
		$\beta \bar{w}s$		
Gen.	*gōwōm	$\beta o\bar{v}n$	gávām	bovom, boum

Dat. (=loc.) *gousu $\beta ou\bar{s}i$, $\beta \acute{o}\epsilon\epsilon\sigma i$ gōšu

Singular: The prim. Greek nominative * $\beta \omega s$ was regularly shortened to $\beta o\bar{v}s$ (§ 83). Dor. $\beta \bar{w}s$ was a new formation from the original accusative, and probably also Lat. bōs (a loan word from one of the other Italic dialects).

The accusative $\beta o\bar{v}n$ was a new formation after the analogy of the nominative. Dor. $\beta \bar{w}n$ = Skr. gám and Indg. *gō(u)m. Lat. bovem was a new formation after the analogy of bovis, bove.

The genitive $\beta o\bar{v}\bar{s}$ corresponds to Vedic gávah beside classical Sanskrit góh, Lat. bovis, Indg. *gowos.

The dative $\beta o\bar{v}\bar{i}$, Skr. gávi and Lat. bove were all regularly developed from the original form *gowi.

Dual: The Greek dual forms were new formations with $\beta o-$, older * $\beta o\bar{v}-$, from forms where it was regular, as in $\beta o\bar{v}s$, $\beta \acute{o}\epsilon s$. The original stem *gōw- occurs in Skr. gávāu with the ending -āu from the u-declension.

Plural: The nominative *βόες* was from the original form **gówes*. Skr. *gávah* can represent a prim. Aryan form **gávas* (= **gówes*) or **gávas* in which case the latter would be a new formation. Lat. *bovēs* was the acc. used for the nominative.

βοῦς, *βῶς* and Skr. *gāḥ* were new formations after the analogy of the acc. singular. Some scholars assume that there existed in the parent Indg. language an acc. form **gó(u)ms* beside **gówñs*, and that the former occurs in Dor. *βῶς*, Skr. *gāḥ* and the latter in Hom. *βόas*, older Skr. *gāvah*, and Lat. *bovēs*.

βοῶν, Skr. *gávām* and Lat. *bovom*, *boum* were all regularly developed from the original genitive form **gowōñm*.

The stem in the dative *βουσí* corresponds to the original stem **gou-* and to the *gó-* in Skr. *góśu*; -*σι* was from the dat. ending of the consonantal stems. Hom. *βόεσσι* was a new formation with *βo-*, older **βoF-*, from the other cases of the plural and -*εσσι* from the dat. plural of the s-stems.

§ 340. It cannot be determined with certainty whether nouns like *δμώς*, *ῆρως*, *μῆτρως*, *πάτρως*, *Τρώς* were originally *ōu*-stems or whether they were o-stems which underwent contraction after the loss of intervocalic -*f*-, as *πάτρως* from **πατρωφos*, and then became declined like consonantal stems. If they were originally *ōu*-stems we must assume that the ablaut-grade *·ōu-* (= ·*ōw-* before vowels), which belonged properly to the stem of the nom. singular only, was levelled out into all the cases in prim. Greek, and that then there were formed a new nom. singular *πάτρως* for **πατρως*, and dat. plural *πάτρωσι* for **πατρωυσι*, the -*ωu-* of which would have been shortened to -*ou*, cp. *βασιλεύς*, *βασιλεῦσι*.

Singular.

Prim. Greek.

Nom. Voc.	-ωνς or -ως	πάτρως
Acc.	-ωρα	πάτρωα, πάτρω, πάτρων
Gen.	-ωρος	πάτρωσ
Dat. (=loc.)	-ωρι	πάτρωῃ, πάτρῳ

Dual.

Nom. Voc. Acc.	-ωρε	πάτρωε
Gen. Dat.	-ωροιν	πατρώοιν

Plural.

Nom. Voc.	-ωρες	πάτρωες, πάτρως
Acc.	-ωρας	πάτρωας, πάτρως
Gen.	-ωρων	πατρώων
Dat. (=loc.)	-ωροι or -ωσι	πάτρωσι

In Attic *πάτρωα*, *πάτρωες*, *πάτρωας* were generally contracted into *πάτρω*, *πάτρως*. Att. Ion. *πάτρων*, *πάτρῳ* were formed after the analogy of *νεών*, *νεῷ* : *νεώς* (§ 327); and similarly a gen. *πάτρω* beside the regular form *πάτρωας* also occurs. The Cretan acc. plural *πάτρωαν* was formed after the analogy of the acc. plural of *ā*-, *o*-, *i*- and *u*-stems.

d. ōi-STEMS.

§ 341. To this declension belong the feminine nouns *εὐεστώ*, *ἡχώ*, *λεχώ*, *πειθώ* and proper names like *Καλυψώ*, *Λητώ*. It is doubtful whether nouns like *ἀηδώ*, *εἰκώ* beside *ἀηδών*, *εἰκών* originally belonged to this class or to the n-declension. The stem-forms originally had the three ablaut-grades *-ōi*, *-oi* and *-i* with regular change of *-i*- to *-j*- before case-endings beginning with a vowel. All three grades occur in the Sanskrit declension of *sákhā*, *friend*, as singular acc. *sákhāyam*, voc. *sákhē*, gen. *sákhyuḥ*; plural nom. *sákhāyah*, loc. *sákhiṣu*. In Greek the *-oi*-grade was generalized in the oblique cases. The nom. singular may have ended in *-ōi* beside *-ō* (nom. Skr. *sákhā*,

Gr. *πειθώ*) in the parent Indg. language (§ 63), and it is possible that the ending *-ωι*, which occurs on old Corinthian inscriptions, represents the original *-ōi*. The *-i* however may have come from the vocative. Skr. *sákhā* and similar nouns were declined in the singular, dual and plural, but few of the words belonging to this declension admit of a plural in Greek. Those which do have a plural form it after the analogy of the o- or n-declension.

Prim. Greek.

Nom.	<i>-ω</i> or <i>-ωι</i>	<i>πειθώ</i> , <i>πειθώ</i>
Voc.	<i>-οι</i>	<i>πειθοῖ</i>
Acc.	<i>-οja</i>	<i>πειθώ</i>
Gen.	<i>-οjos</i>	<i>πειθοῦς</i>
Dat. (=loc.)	<i>-οji</i>	<i>πειθοῖ</i>

The Dor. Boeot. and Lesb. dialects had the case-endings *-ω*, *-ων*, *-ως*, *-φ* after the analogy of the similar quantitative endings of the ā-declension. The origin of the Ion. acc. ending *-οῦν* (Herodotus *Ἀητοῦν*, &c.) is obscure. Ion. had the gen. ending *-όσ* beside Att. Ion. *-οῦς*. If nouns like *ἀηδών* originally belonged to this class the *-ν* was first added in the nom. singular and then they passed over into the n-declension.

B. THE CONSONANTAL DECLENSION

I. STEMS ENDING IN AN EXPLOSIVE.

§ 342. The stems of nouns belonging to this class end in a dental, labial or guttural. The stem of the monosyllabic nouns had originally various grades of ablaut in the different cases, but in Greek as in the other languages one or other of the grades was generally levelled out into all the cases, thus the ablaut-grade *ō*, which originally belonged only to the nom. singular, was generalized in Sanskrit *vāk* = Lat. *vōx*, *ōψ*, *voice*; acc. *vācam*, *vōcem*, *ōπα*; gen. *vācāh*, *vōcis*, *ōπόs*; loc. *vācí*, *vōce*, *ōπí*, whereas in Greek

the grade **o**, which originally belonged to the oblique cases, was levelled out into the nominative; and similarly Lat. *lēx*, *rēx* beside *φλέψ*, *φλόξ*; and conversely *κλώψ*, *σκώψ*, *ώψ* beside Lat. *nex*, *ops*. The original ablaut-grades were better preserved in the declension of the Indg. word **pōts*, **pēts*, *foot*. See § 284, I.

Singular.

Indg.

Nom. Voc.	<i>-s</i>	<i>πούς</i> , <i>πός</i> , <i>πώς</i>	<i>pát</i>	<i>pēs</i>
Acc.	<i>-m</i>	<i>πόδα</i>	<i>pádam</i>	<i>pedem</i>
Gen.	<i>-os</i> , <i>-es</i>	<i>ποδὸς</i>	<i>padáh</i>	<i>pedis</i>
Dat. (=loc.)	<i>-i</i>	<i>ποδί</i>	<i>padí</i>	<i>pede</i>

Dual.

Nom. Voc. Acc.	<i>e</i>	<i>πόδε</i>	(<i>pádāu</i>)
Gen. Dat.	?	<i>ποδοῖν</i>	

Plural.

Nom. Voc.	<i>-es</i>	<i>πόδες</i>	<i>pádah</i>	(<i>pedēs</i>)
Acc.	<i>-ns</i>	<i>πόδας</i>	<i>padáh</i>	<i>pedēs</i>
Gen.	<i>-ōm</i>	<i>ποδῶν</i>	<i>padám</i>	<i>pedum</i>
Dat. (=loc.)	<i>-su</i>	<i>ποστί</i> , <i>ποσί</i>	<i>patsú</i>	

Dor. *πώς* from **pōts* represents the original form. *πός* was a new formation with *-o-* from the oblique cases. It is difficult to account for *πούς* which seems to be merely a lengthening of *πός*. Hom. *ποσσί* beside *ποσί* (§ 212). Hom. *πόδεσσι* was formed from the stem *ποδ-* with the dat. ending of the s-stems. In Lat. the acc. *pedēs* from **pedens* was used for the nominative. The e grade of ablaut occurs in *πέδον* and in the Boeot. Lesb. Cret. and Arcadian preposition *πεδά*, *with, after*.

§ 343. The stem-endings *-d*, *-b*, *-g* became *-t*, *-p*, *-k* before the case-endings *-s*, *-su* in prim. Indo-Germanic (§ 106). The original stem-endings *-dh*, *-th*, *-bh*, *-ph*, *-gh*, *-kh* likewise became *-t*, *-p*, *-k* before these case-endings in prim.

Greek (§ 109). Prim. Greek ps and ks remained in the historic period of the language. ts became ss, which was simplified to s finally. Medial ss remained in the oldest Greek, but already in Homer s existed beside ss (§ 166). Examples are: κλώψ, κλωψί : κλωπ-, φλέψ : φλεβ-, κατῆλιψ : κατηλιφ-, φύλαξ, φύλαξι : φυλακ-, μάστιξ : μαστίγ-, σάλπιγξ : σαλπιγγ-, θρίξ, θριξί : τριχ-, νεότης from *νεοτάτς, Lat. novitās : νεοτητ-, novitāt-, νύξ : νυκτ-, cp. Lat. nox : noct-, ἄναξ : ἄνακτ-, πούς, ποσσί, ποσί : ποδ-, λαμπάς : λαμπαδ-, κόρυς : κορυθ-, ὅρνις : ὅρνιθ-.

The nom. singular of stems ending in -ιτ, -ιδ, -ιθ, -ιδ, -ιθ regularly fell together with the nominative of the i- and u-declensions which gave rise to various new formations especially in the voc. and acc. singular, as voc. Ἀρτεμι, ἐλπί, ἔρι, παῖ, τυραννί : Ἀρτεμιδ-, ἐλπιδ-, ἔριδ-, πα(γ)ιδ-, τυραννιδ-. Acc. χάριν, ἔριν, κλεῖν, νήιν, ὅπιν, ὅρνιν, φύλοπιν, κόρυν : χάριτα, ἔριδα, κλεῖδα, νήιδα, ὅπιδα, ὅρνιθα, φυλόπιδα, κόρυθα. And similarly accusatives like πολύπουν, τρίπουν (Hom. τρίποδα) were formed after the analogy of εὔνουν : εὔνους.

It is improbable that the vocatives ἄνα, γύναι from *ἄνακτ, *γυναικ represent an original distinction between the nom. and voc. in this class of nouns.

§ 344. The bare stem was originally used for the nom. voc. and acc. neuter. In Greek the operation of the laws of final consonants has to be taken into consideration (§ 230), as κῆρ from *κηρδ; the gen. κῆρος was a new formation from the nominative, cp. Lat. cor, cordis; γάλα from *γαλακτ, cp. Lat. lac, lactis; μέλι from *μελιτ.

2. THE Π-DECLENSION.

§ 345. The stems in -μον-, -μεν- (δαιμον : δαιμον-, τέρμων : τερμον-, ποιμήν : ποιμεν-) and in -ον-, -εν- (πέπων : πεπον-, τέκτων : τεκτον-, τέρην : τερεν, φρήν : φρεν-) originally had various grades of ablaut in the stem-endings of the different

cases, as *-mōn*, *-mēn*; *-mon-*, *-men-*; *-mn-* before vowels, but *-mŋ-* before consonants; *-ōn*, *-ēn*; *-on-*, *-en-*; *-n-* before vowels, but *-ŋ-* before consonants. The alternation between ē and ō originally depended upon the position of the accent of the word. The former stood in the syllable containing the chief accent and the latter in the next syllable following it, as *ποιμήν*, *ποιμένες* : *τλήμων*, *τλήμονες*; *φρήν*, *φρένες* : *ἄφρων*, *ἄφρονες* (cp. § 83). When the accent was shifted to the case-ending the vowel disappeared and then the n remained consonantal or became vocalic according as the next syllable began with a vowel or a consonant, as *ἀρήν*, *κύων*, gen. *ἀρνός*, dat. pl. **ἀρασί*, **κυασί*. In the parent Indg. language e alternated with o in the declension of the same word. This distinction was preserved in Gothic, as *guma*, *man*, dat. *gumin*, acc. *guman* where the endings *-in*, *-an* represent original *-eni*, *-onm*; and similarly in the Baltic-Slavonic languages. In Sanskrit Indg. e and o fell together in a (§ 42) whereby the original distinction became obliterated. It may be however that the two vowels only regularly fell together in closed syllables, but that in open syllables the former vowel became a and the latter ā. This would account for the long ā in the acc. sing. *rājānam*, *king*, nom. pl. *rājānah*, beside loc. sing. *rāj-ani* = Indg. *-eni*. In Greek the distinction became entirely obliterated by the levelling out of one or other of the two vowels. Then those stems which levelled out the e came to have η in the nom. singular and those which levelled out the o came to have ω. In the present state of our knowledge it cannot be determined with any degree of certainty which of the strong cases originally had e and which had o. In reconstructing the primitive stem-forms we shall therefore not attempt to distinguish between e and o in the declension of the same word. *-mōn*, *-mēn*, *-ōn*, *-ēn* regularly belonged to the nom. singular only; *-mon-*, *-men-*, *-on-*, *-en-* to the voc. acc. and

dat. (= loc.) singular, the nom. plural, and the nom. voc. and acc. dual; **-mn-**, **-n-** to the gen. singular and plural, gen. and dat. dual, and acc. plural; and **-mŋ-**, **-ŋ-** to the dat. (= loc.) plural (§ 319). In Greek ē or ō regularly appears in the nom. singular. The oblique cases have generally levelled out the e or o, but in some words the ē or ō of the nominative was levelled out into the oblique cases, and in others the stem-form of the weak cases became generalized, as ποιμῆν, ποιμένα, ποιμένος for *ποιμνος; δαίμων, δαίμονα, δαίμονος for *δαιμνος; πευθήν, πευθῆνος, κλύδων, κλύδωνος; κύων, κύνα, κυνί for *κυωνα, *κυωνι; ἔρσην regular gen. ἄρσηνός to which was formed a new nominative ἄρσην, gen. ἄρσενος. Cp. the similar levellings in Lat. homo, hominem, hominis, homine, hominēs, hominum, hominibus; sermo, sermōnem, sermōnis, sermōne; caro, carnem, carnis, carne; and in Goth. tuggōð, tongue, acc. tuggōñ, gen. tuggōñs, dat. tuggōñ.

Singular.

Indg.

Nom.	-ēn , -ōn	ποιμῆν	δαίμων	rājā, king
	ē , ō			
Voc.	-en , -on	ποιμῆν	δαῖμον	rājan
Acc.	-en-m , -on-m	ποιμένα	δαίμονα	rājānam
Gen.	-n-os , -n-es	ποιμένος	δαίμονος	rājñah
Dat. (=loc.)	-en-i , -on-i	ποιμένι	δαίμονι	rājani, rājñi

Dual.

Nom. Voc. Acc.	-en-e , -on-e	ποιμένε	δαίμονε	(rājānāu)
Gen. Dat.	?	ποιμένοιν	δαίμονοιν	

Plural.

Nom. Voc.	-en-es , -on-es	ποιμένες	δαίμονες	rājānah
Acc.	-n-ŋs	ποιμένας	δαίμονας	rājñah
Gen.	-n-ōñm	ποιμένων	δαίμονων	rājñām
Dat. (=loc.)	-ŋ-su	ποιμέσι	δαίμοσι	rājasu

Singular: The nominative ended in the parent Indg. language in *-ēn*, *-ōn* beside *-ē*, *-ō*. The reason for this difference is unknown (cp. § 29). The former was generalized in Greek (but see § 341) and also in the Gothic masculines, as *guma*, *man*, with *-a* from older *-ēn* or *-ōn*; and the latter in Sanskrit, Latin and also in the Gothic feminines and neuters, as *homo*, *sermo*; *tuggō*, *tongue*, *haírtō*, *heart*.

The vocative originally ended in *-en*, *-on*, which occurs in Skr. *rājan* and in Gr. barytones with nominatives in *-ων*, as *δαῖμον*, *κύον*, *πέπον*. In the oxytones with nominatives in *-ών* and in all *-μεν-*, *-εν-* stems the nominative came to be used for the vocative, as *ἡγεμών*, *ποιμήν*, &c. In Latin and Gothic the nominative was also used for the vocative.

The accusatives *ποιμένα*, *δαίμονα*, Lat. **hominem**, Goth. *guman* regularly correspond to the original stem- and case-ending. Forms like *ἀρνα* for **ἀρένα*, *κύνα* for **κύονα* = Skr. *svánam* were new formations after the analogy of the gen. singular and plural; and similarly Lat. *carnem* for **carinem*.

Regular forms of the genitive were *ἀρνός*, *κυνός* (= Skr. *śúnah*), Skr. *rājñah*, Lat. *carnis*. The stem-forms *ἀρν-*, *κυν-* then became levelled out into all the cases except the nom. singular and dat. plural; and similarly with the Lat. stem *carn-*. *ποιμένος*, *δαίμονος*, &c. were new formations with *-εν-*, *-ον-* from cases like the accusative; and similarly Lat. *hominis*, Goth. *gumins*.

Regular forms of the original locative were *ποιμένι*, *δαίμονι*, &c., Skr. *rājani*, Lat. *homine*, Goth. *gumin*. Skr. *rājñī* was a new formation with *-jñi-* from the genitive.

Dual: The genitive and dative had *-en-*, *-on-* from the strong stem-forms. On the ending *-ον* see § 325.

Plural: It has been assumed above that the accusative had originally the weak stem-ending *-n-* corresponding to *ἀρνας*, *κύνας* and Skr. *rājñah*, but the Greek forms prove

nothing because the weak stem-ending of these two words was generalized in prim. Greek (see gen. singular). And Skr. *rājñāḥ* may be a new formation after the analogy of the genitive. It is therefore not improbable that the accusative originally had the strong stem-ending *-en-*, *-on-* as in *ποιμένας*, *δαιμόνας*, Lat. *hominēs* and in other languages. Goth. *gumans* is the nom. used for the accusative.

The regularly developed forms of the genitive were *ἀρνῶν*, *κυνῶν*, Skr. *rājñām*. *ποιμένων*, *δαιμόνων*, Lat. *hominum*, Goth. *gumanē* were new formations after the analogy of the nominative.

Skr. *rājasu* with *-asu* from *-ṇsu* represents the original locative. The *-a-* = Indg. *-ṇ-* was preserved in *φρασί* (beside the later new formation *φρεσί*) which occurs in Pindar and on an Attic inscription belonging to the beginning of the sixth century B. C., and also in *ἀρνάσι* for **ἀρασί* with *-ν-* from **ἀρνός*, &c. But in other words the dative was a new formation with the substitution of the vowel in the generalized stem-form for *-a-*, and with *-σι* from the dat. of consonantal stems where the *-σ-* was not originally inter-vocalic, as in *ποσσί*, *ποσί* from **ποτσί* (§ 343), as *ποιμέσι*, *δαιμοσι*, *κλύδωσι* with *-εσι*, *-οσι*, *-ωσι* for *-ασι*; *κυσί* for **κυασί* after the analogy of *κυνός*, &c.

§ 346. Here may conveniently be placed: *χθών* from **χθόμ*, cp. *χαμαί*, Skr. *kṣámi*, *on the ground*, *χιών* from **χιώμ*, cp. Lat. *hiems*, neut. *ἐν* from **σέμ*, cp. Lat. *sem-per*, where final *-μ* regularly became *-ν* (§ 141) and then the *-ν* was levelled out into the oblique cases, as gen. *χθονός*, *χιόνος*, *ἐνός* for older **χθομός*, **χιόμος*, **έμός*.

§ 347. Att. *μήν*, *χήν* were originally s-stems. Nom. Ion. *μείς*, Dor. *μῆς* from **μεν्स*, older **μηνς* (§ 70), gen. Lesb. *μηννος*, Att. Ion. Dor. *μηνός* from **μηνσος* (§ 216), from which was formed a new Attic nom. *μήν* after the analogy of the *n*-declension; and similarly prim. Greek **χᾶς* from

*χανς, gen. χᾶνός, χηνός from *χανσος (§ 69, 2), from which was formed a new nom. Dor. χᾶν, Att. χῆν.

§ 348. Beside the stems ·men-, ·mon-, ·en-, ·on· there also existed in the parent Indg. language stems in ·(i)jen-, ·(i)jon· with the ablaut-grades ·(i)jēn, ·(i)jōn; ·(i)jen, ·(i)jon; ·in, ·in· and with the same distribution of the grades as in the ·men-, ·mon-stems (§ 345). The original type of inflection was preserved in the Gothic jan-stems, as nom. arbja, *heir*, acc. arbjan, gen. arbjins, dat. arbjin. In Sanskrit the weak stem-ending ·in· became generalized, as masc. nom. balí for *balyā, *strong*, voc. bálin, acc. balínam, gen. balínah, loc. balíni. In Latin the ·(i)jōn grade became generalized, as in legio, legiōnem, legiōnis, legiōne; and similarly in Greek words like ἵθυπτίων, μαλακίων, οὐρανίων, gen. -ίωνος. But the weak stem-ending ·in· became generalized in stems like ἀκτῖν, γλωχῖν, δελφῖν, θῖν, ρῖν, gen. -ίνος; and similarly in Gothic feminine nouns like managei, *multitude*, gen. manageins. From the stem-form in -īn· a new nominative was formed in prim. Greek after the analogy of the nominatives in -s. And then the -v· disappeared (§ 154). At a later period new nominatives in -v were formed after the analogy of the nominative of the ·men-, ·mon-, ·en-, ·on·-stems, as γλωχῖν, δελφῖν, θῖν, ρῖν beside γλωχίς, δελφίς, θίς, ρίς.

§ 349. From the generalized stem μέλαν· (gen. μέλανος) was formed the nom. μέλας older *μέλανς (§ 154) after the analogy of the nominatives in -s. It is probable that this word originally belonged to the o-declension, cp. Skr. malināḥ, Indg. *melənos, Gr. *μέλανος, *black, dirty*, and μέλανόχροος beside μελάγχροος. μέλαν· may have come to be regarded as the stem in prim. Greek through the influence of the feminine μέλαινα from *μέλαινα (§ 322).

§ 350. The neuter nouns and adjectives were originally declined alike as in Sanskrit and Gothic, but in prim. Greek the generalized stem-form of the masculine became

used for the nom. voc. and acc. singular of the adjectives, as *τέρεν*, *ἄρσεν*, *πέπον*, *σῶφρον*, *μέλαν*. Nom. voc. and acc. plural *τέρενα*, *πέπονα*, *μέλανα*, &c. with -a = Skr. -i, Indg. -ə (§ 353).

The original declension of the nouns was preserved in Sanskrit and Latin, but in Greek all the inflected forms were new formations.

Singular.

Indg.

Nom. Voc. Acc.	-m̥ _ŋ	ὄνομα	նամա	նոմեն
Gen.	-mn-os, -es	ὸνόματος	նամնահ	նոմինիս
Dat. (=loc.)	-men-i, -mon-i	ὸνόματι	նամնան	նոմինե

Dual.

Nom. Voc. Acc.	-en-i, -i	ὸνόματε	նամնան
Gen. Dat.	?	ὸνομάτου	

Plural.

Nom. Voc. Acc.	-mēn-ə, -mōn-ə } -men-ə, -mon-ə }	ὸνόματα	նամնան
Gen.	-mn-ōm̥	ὸνομάτων	նամնամ
Dat. (=loc.)	-m̥-su	ὸνόμασι	նամնաս

The endings in *ὄνομα*, *նամա*, *նոմեն*, *name* correspond to the original ending of the nom. acc. singular. Latin generalized the stem-form *nōmen*. The Sanskrit ending of the nom. pl. corresponds to Indg. -mōn-ə, and the Latin ending to Indg. -men-ə, except that the -a for -e was from the nom. pl. of the neuter o-stems. The dual *ὸνόματε* had -e from the masculines.

Prim. Greek probably had the generalized stem-form **ὸνομαν-* except in the dat. plural, as *ὄνομα*, **ὸνόμανος* for **ὸνομνος* = Skr. *նամնահ*, **ὸνόμανι*; **ὸνόμανα*, **ὸνομάνων*, *ὸνόμασι* which can also be from **ὸνόματσι* (§ 166). It is difficult to account satisfactorily for the -τ- in historic Greek. It may have arisen from the Indg. adverbial particle -tos which occurs in *ἐκ-τός*, *ἐν-τός* = Lat. *in-tus*,

cp. also Skr. *i-táḥ, inde*. In Sanskrit *·tah* came to have the meaning of the ablative, as *nāma-tah*, *by name*, with which the gen. *ónóμα-tos* corresponds in form. *ónóμatos* may then have come to be used for the gen. instead of the regular form **ónōμos* = Skr. *námnaḥ*, and the *-τ-* of the gen. have become levelled out into all the inflected forms. But Brugmann's explanation (*Grundriss*, &c., vol. ii, second ed., p. 237) is probably the right one. He assumes that it probably arose from the blending of *-men-* and *-m̥t-o-* into one paradigm, as Lat. *strāmen* : *strāmina*, *strāminum* = **στρώμανα*, **στρωμάνων* beside *strāmentum* : *strāmenta*, *strāmentōrum* = *στρώματα*, *στρωμάτων*. After the analogy of *στρώματα*, *στρωμάτων* beside **στρώμανα*, **στρωμάνων* there were formed *στρώματος*, *στρώματι* beside **στρώμανος*, **στρώμανι* and then all the forms with the stem **στρωμαν-* eventually disappeared. There is however a third possible explanation which has much in its favour, viz. that in the parent Indg. language consonantal and o-stems of the same word often existed side by side, as *téρην* : *téreνos*, *πīap* : *πīapós*, *πoύs* : *πéδoν*, *cognōmen*, *strāmen* : *cognōmentum*, *strāmentum*. A large number of similar examples in the various languages has been collected by Brugmann in *Indogermanische Forschungen*, vol. ix, pp. 366–8. It is therefore quite possible that *-m̥t-* existed beside *-m̥t-o-* and that some of the Greek neuters in *-μa* originally ended in *-m̥t* which became generalized, whereas Latin generalized *-m̥t-o-*. *ónōμa* may therefore stand for older **ónōμat* (§ 230) with *-τ-* regularly preserved in the inflected forms. Cp. *ónōμa*, *στρώμa*, *ζεῦγμa* beside *cognōmentum*, *strāmentum*, *jūmentum* from **jouxmentom*.

3. STEMS ENDING IN *-nt.*

§ 351. To this class belong the masculine and neuter of all active participles except the perfect (§ 552).

a. THEMATIC PARTICIPLES.

§ 352. These comprise the participles of the present and second aorist together with a few isolated participles which were no longer used as such in the oldest Greek, as γέρων, ἔκών, κρείων (κρέων), μέδων, μέλλων. λέων was originally an n-stem which passed into this class owing to the nom. and voc. singular being alike in both declensions, cp. the feminine λέαινα, and Lat. leo, leōnis.

Singular.

	Indg.			
Nom.	-ont-s	φέρων	bháran	ferēns
Voc.	-ont	φέρων	bháran	(ferēns)
Acc.	-ont- ^m	φέροντα	bhárantam	ferentem
Gen.	-nt-os, -es	φέροντος	bháratah	ferentis
Dat. (=loc.)	-nt-i	φέροντι	bháрати	ferente

Dual.

Nom. Voc. Acc.	-ont-e	φέροντε	(bhárantāu)
Gen. Dat.	?	φέρόντοιν	

Plural.

Nom. Voc.	-ont-es	φέροντες	bhárantah	(ferentēs)
Acc.	-nt-ŋs	φέροντας	bháratah	ferentēs
Gen.	-nt-ōm	φέρόντων	bháratām	(ferentium)
Dat. (=loc.)	-nt-su	φέροντι	bháratsu	

The strong form -ont- originally belonged to the nom. voc. and acc. singular and dual and the nom. plural, and the weak form -nt- to all the other cases. The original distinction between the strong and weak forms of the suffix was preserved in Sanskrit. But Greek generalized the -ont- and Latin the -nt-form. Some scholars assume that this class of words had -ont- in all the cases in the parent Indg. language, and that the Sanskrit forms with -at- =

Indg. *-nt-* were new formations after the analogy of the stems in *-went-* (§ 356), but this would not account for the Latin forms all of which point to the ablaut-grade *-nt-*.

The original nom. singular was **bhéronts*, *bearing*, which corresponds to Skr. *bháran* with regular loss of the final *-ts*, and Goth. *báirands*. Lat. *ferēns* was from **ferents* with *-ent-* from the gen., &c. *φέρων* was a new formation after the analogy of the *n*-stems. The new formation first took place in words like *ἐκών*, *μέλλων* where the neuter *ἐκόν*, *μέλλον* from **ἐκόντ*, **μέλλοντ* was like an *n*-stem. To *ἐκόν*, *μέλλον* a new masc. nom. *ἐκών*, *μέλλων* was formed after the analogy of *πῖον* : *πίων*. And then to the neuter *φέρον* a new masc. nom. *φέρων* was formed.

The vocative *φέρων* like Lat. *ferēns* was the nom. used for the vocative. The old voc. was preserved in forms like *γέρον*, *ἐκόν*, &c. and in Skr. *bháran*. Dat. pl. *φέρουσι* from **φέροντσι*.

§ 353. The Indg. form of the nom. voc. and acc. singular neuter was **bhérnt* which became *bhárat* in Sanskrit. Lat. *ferēns* can also be from **bhérnt*, because *-nt* would regularly become *-ēns* in Latin. Or it may simply be the masc. used for the neuter. *φέρον* from older **φέροντ* with *-οντ* from forms where it was regular.

The original form of the nom. voc. and acc. plural was **bhéronts* = *φέροντα*, Skr. *bháranti*. Lat. *ferentia* like *ferentium* was a new formation after the analogy of the *i*-declension.

b. ATHEMATIC PARTICIPLES.

§ 354. Three categories are to be distinguished in the participles belonging to this class. (1) Participles which originally had *-ent-* in the strong and *-nt-* in the weak cases (§ 319). (2) Those which had *-nt-* in all cases. (3) Those which had *-nt-* in all cases. The first and second categories were preserved in Sanskrit, but the third was

remodelled after the analogy of the first. The original distinctions in the three categories were almost entirely obliterated in prim. Greek by analogical formations. The *-nt-*, which originally belonged only to the third category, was extended by analogy to all participles. And then the vowel preceding the *-nt-* was made the same as the vowel in the plural of the corresponding indicative. Examples are: (1) Skr. *krīṇ-ánt-* with *-ánt-* from **-ént-*, *krīṇ-at-* with *-at-* from *-ṇt-* : *krīṇāmi*, *I buy*, *krīṇánti*, *they buy*, but Gr. *δαμνᾶς* from **δαμναντς* for **δαμνεντς*, gen. *δαμνάντος* for **δαμνατος* : *δάμνημι*, *δάμναμεν*; Skr. *sunv-ánt-*, *sunv-at-* : *sunómi*, *I press out*, *sunvánti*, *they press out*; *δεικνύς* from **δεικνυντς* for **δεικνυεντς*, gen. *δεικνύντος* for **δεικνυατος* : *δείκνυμι*, *δείκνυμεν*. The only certain trace of the original ablaut-grade *-ént-* occurs in the Doric nom. pl. *ἐντες* from **sentes*, *being*, with ē for *ē after the analogy of other parts of the verb; and similarly with the smooth breathing in Ion. *ἔών*, Att. *ῶν*. *ἔών*, *ῶν*, stem **sont-*, Skr. *sánt-*, *sat-*, *being*, and *lów*, stem **iont-* for **jont-* (with i- for j- after the analogy of *ἵμεν*, *ἵτε*), Skr. *yánt-*, *yat-*, *going*, went over into the thematic declension in prim. Greek. This *-ont-* grade of ablaut was also preserved in the old isolated participle *όδούς* from **όδοντς*, gen. *όδόντος*, Skr. *dánt-*, *dat-*, *tooth*.

(2) Skr. *dádat*, gen. *dádataḥ* with *-at-* from *-ṇt-* : *dá-dámi*, *I give*, *dádati*, *they give*, but Gr. *διδούς* from **διδοντς* for **διδατς*, gen. *διδόντος* for **διδατος* : *δίδωμι*, *δίδομεν*; Skr. *dádhataḥ* : *dádhámi*, *I put, place*, *dádhati*, *they put, place*, but *τιθείς* from **τιθεντς* for **τιθατς*, gen. *τιθέντος* for **τιθατος* : *τίθημι*, *τίθεμεν*; and similarly *ἰστάς*, *ἰστάντος* : *ἴσταμεν*, and aorists active like *λύσας*, *λύσαντος* : *ἔλυσαμεν*, *ἔλυσαν*; *φήνας*, *φήναντος* : *ἔφήναμεν*, *ἔφηναν*.

(3) In this category the *-nt-* was originally preceded either by a long vowel in all the cases or by a long vowel in the

strong cases and by -ə· (= Gr. *a*, Skr. *i*, § 49) in the weak cases. To the former belong aorist active participles like *γνούς* from **γνωντς* older **γνωντς* (§ 70), gen. *γνόντος* : *ἔγνων*; *δρᾶς* from **δραντς* older **δρᾶντς*, gen. *δράντος* : *ἔδρᾶν*; and similarly the aorist passive participles in -eis, as *φανείς* : *ἐφάνην*, *φανθείς* : *ἐφάνθην*, *λυθείς* : *ἐλύθην*. And to the latter belong the aorist active participles *δούς*, *θείς* (Cret. *καταθένς*), *στᾶς*, from **δοντς*, **θεντς*, **σταντς*, gen. *δόντος*, *θέντος*, *στάντος* : *ἔδομεν*, *ἔθεμεν*, *ἔστημεν* older **ἔσταμεν*. The original inflection of these participles was nom. **dónts*, **dhénts*, **stánts*, gen. **déntós*, **dhéntós*, **sténtós*, and it is possible that *δούς*, *θείς*, gen. *δόντος*, *θέντος* represent the generalized forms **dónt-*, **dhént-* which would regularly become *δοντ-*, *θεντ-* (§ 70). *στᾶς*, *στάντος* can be from the strong stem **stánt-* or the weak stem **stént-* (§ 49); and similarly with the old isolated participial form *πᾶς* from **παντς* older **πāntrs*, gen. *παντός*, Indg. **kwánts*, gen. **kwéntós*. The neuter *πᾶν* had *ᾶ* from *πᾶς*, cp. *πρόπᾶν*.

§ 355. The nom. voc. and acc. neuter singular has the bare stem with regular loss of the final -τ (§ 230), as *δαμάν*, *δεικνύ*, *διδόν*, *τιθέν*, *ιστάν*, *λύσαν*, *γνόν*, *δόν*, *θέν*, *στάν*, *πᾶν* with *ᾶ* from *πᾶς*. The prim. Greek ending -ντ and the vowel preceding it were of the same origin as in the stem of the corresponding masculines.

The nom. voc. and acc. plural originally ended in -ə = -α, Skr. *-i*, as *διδόντα*, Skr. *dáda(n)ti*, *giving*.

4. STEMS ENDING IN -went.

§ 356. The suffix of the adjectives belonging to this class had originally two grades of ablaut. The strong form -went, Skr. -vant-, Gr. -fēντ- belonged to the nom. voc. and acc. singular and dual, and the nom. plural. The weak form -wnt-, Skr. -vat-, Gr. -*fār- belonged to all the other cases. Sanskrit preserved the original distinction

between the strong and weak form of the suffix, as acc. sing. *bhágavantam*, *blessed*, gen. *bhágavataḥ*. But in Greek the strong form *-Fεντ-* was levelled out into all the cases except the dat. plural.

Singular.

Indg.

Nom.	<i>-went-s</i>	<i>χαρίεις</i>	<i>bhágavān</i>
Voc.	<i>-went</i>	<i>χαρίεν</i>	<i>bhágavan</i>
Acc.	<i>-went-ṁ</i>	<i>χαρίεντα</i>	<i>bhágavantam</i>
Gen.	<i>-wṇt-os, -es</i>	<i>χαρίεντος</i>	<i>bhágavataḥ</i>
Dat. (=loc.)	<i>-wṇt-i</i>	<i>χαρίεντι</i>	<i>bhágavati</i>

Dual.

Nom. Voc. Acc.	<i>-went-e</i>	<i>χαρίεντε</i>	<i>(bhágavantāu)</i>
Gen. Dat.		<i>χαρίεντοιν</i>	

Plural.

Nom. Voc.	<i>-went-es</i>	<i>χαρίεντες</i>	<i>bhágavantah</i>
Acc.	<i>-wṇt-ns</i>	<i>χαρίεντας</i>	<i>bhágavataḥ</i>
Gen.	<i>-wṇt-ōṁ</i>	<i>χαρίεντωι</i>	<i>bhágavatām</i>
Dat. (=loc.)	<i>-wṇt-su</i>	<i>χαρίεσι</i>	<i>bhágavatsu</i>

The nom. singular may originally have ended in *-wēnt-s* corresponding to the Sanskrit ending *-vān*. The ending *-eis* can be from either prim. Gr. *-Fηντ-s* (§ 70) or *-Fεντ-s* (§ 69, 1). The prim. Greek dat. pl. was **χαριFατσι* which became **χαριFετσι* through the influence of the *ε* in *-Fεντ-*. Then **χαριFετσι* regularly became *χαρίεσι* through the intermediate stage **χαρι(F)εσσι* (§ 166). Of like origin is the *ε* in the fem. *χαρίεσσα*, prim. Gr. **χαριFατja*, and in *χαρίεστερος*, *χαρίεστατος*.

§ 357. The regular form of the nom. voc. and acc. neuter singular would have been **χαρία* from **χαριFατ*, cp. Skr. *bhágavat*. *χαρίεν* from **χαριFεντ* was a new formation with *-Fεντ* for *-Fατ* as in the gen. singular, &c.

The nom. voc. and acc. plural *χαρίεντα* was from **χαρι-*
ϝεντα, cp. Skr. *bhágavanti*, with *-ϝεντα*, Skr. *-vanti* from
 Indg. *-wenta*.

5. STEMS ENDING IN A LIQUID.

§ 358. The only stem ending in *-l* is *ἄλς* (*ἄλα*, *ἄλός*, &c.) which regularly has *-s* in the nominative.

STEMS ENDING IN *-r*.

§ 359. To this class belong: (1) The nouns of relationship *πατήρ*, *μήτηρ*, *θυγάτηρ* and *δᾶήρ* from **δαιϝηρ* (§ 57); *φράτηρ*, *φράτωρ* = Skr. *bhrātar-*, *brother*, became isolated from this category owing to their change in meaning. (2) The nomina agentis, as *δοτήρ*, *δώτωρ*, *γενετήρ*, *γενέτωρ*, *ρήτήρ*, *ρήτωρ*, &c. (3) A few other nouns which belong to neither of these two categories, as *ἀήρ*, *αιθήρ*, *ἀθήρ*, *ἀστήρ*, *αστήρ*, *ἀνήρ*, and the monosyllables *θήρ*, *φώρ*.

The stem-endings originally had various grades of ablaut in the different cases, as *-tēr*, *-tōr*; *-ter-*, *-tor-*; *-tr-* before vowels, but *-tr̥-* before consonants, and similarly *-ēr*, *-er-*, *-r-*, *-r̥-*. The alternation between ē and ō was the same as in the ι-declension (§ 345). In the weak case-forms the vowel disappeared and then the *-r-* remained consonantal or became vocalic according as the next syllable began with a vowel or a consonant, as *πατρός*, *πατρῶν*, *πατράσι*, cp. Skr. *pitṛśu*. *-tēr*, *-tōr*, *-ēr* regularly belonged to the nom. singular only; *-ter-*, *-tor-*, *-er-* to the voc. acc. and dat. (= loc.) singular, the nom. plural, and the nom. voc. and acc. dual; *-tr-*, *-r-* to the gen. singular and plural, gen. and dat. dual, and acc. plural; and *-tr̥-*, *-r̥-* to the dat. (= loc.) plural. In Greek ē or ō regularly appears in the nom. singular. In the nouns of relationship the original distinction between *-tēr*, *-ter-*, *-tr-*, *-tr̥-* was preserved in Sanskrit and also in Greek apart from the new formations

explained below, but in Latin the weak stem-ending *-tr-* became generalized in the oblique cases.

The nomina agentis were originally declined like the nouns of relationship as in Sanskrit, but in Latin *-tōr-* became generalized. In Greek the *-η-* of the nom. of nouns ending in *-τηρ* was levelled out into all the cases, as *δοτήρ*, *ρήτήρ*, *σωτήρ*, gen. *δοτῆρος*, *ρήτῆρος*, *σωτῆρος* except that the voc. of *σωτήρ* was *σῶτερ*; and similarly the monosyllable *θήρ*, *θηρός*. Those ending in *-τωρ* generalized the ablaut-grade *-τορ-*, as *δώτωρ*, *ρήτωρ*, gen. *δώτορος*, *ρήτορος*; and similarly *φράτωρ*, *φράτορος*. In *μήστωρ*, *μήστωρος* and the monosyllable *φώρ*, *φωρός* the *-ω-* of the nom. was generalized.

§ 360.

Singular.

Indg.

Nom.	<i>-tēr</i> , <i>-tē</i>	<i>πατήρ</i>	<i>pitá</i>	pater
Voc.	<i>-ter</i>	<i>πάτερ</i>	<i>pítar</i>	pater
Acc.	<i>-ter-ṁ</i>	<i>πατέρα</i>	<i>pitáram</i>	patrem
Gen.	<i>-tr-ōs</i> , <i>-es</i>	<i>πατρός</i>	<i>pitúr</i>	patris
Dat. (=loc.)	<i>-ter-i</i>	<i>πατέρι</i>	<i>pitári</i>	patre

Dual.

Nom. Voc. Acc.	<i>-ter-e</i>	<i>πατέρε</i>	(<i>pitárāu</i>)
Gen. Dat.	?	<i>πατέροιν</i>	

Plural.

Nom. Voc.	<i>-ter-es</i>	<i>πατέρες</i>	<i>pitárah</i>	(<i>patrēs</i>)
Acc.	<i>-tr-ōs</i>	<i>πατέρας</i>	(<i>pitřn</i>)	<i>patrēs</i>
Gen.	<i>-tr-ōm</i>	<i>πατρῶν</i>	(<i>pitřnám</i>)	<i>patrum</i>
Dat.	<i>-tr-su</i>	<i>πατράσι</i>	<i>pitřšu</i>	

The nom. singular ended in the parent Indg. language in *-tēr* beside *-tē* (cp. § 29). The reason for this difference is unknown. The former was generalized in Greek, Latin and the Germanic languages and the latter in Sanskrit and

the Baltic-Slavonic languages. The Greek stem- and case-endings of the inflected forms given above correspond to the Indg. stem- and case-endings except the acc. and dat. plural. It is possible that the accusative originally had the stem-ending *-ter-* corresponding to *πατέρας*. *πατράσι* had *-σι* from the dat. of consonantal stems where the *-σ-* was not originally intervocalic as in *ποσσί*, *ποσί* (§ 342). On the final *-ι* see § 316. Beside the regular forms the nouns of relationship often have analogical formations in the oblique cases, especially in the gen. and dat. singular and gen. plural, as Hom. *πατέρος*, *μητέρος*, Hom. and Att. *πατέρων*, *θυγατέρος* with the substitution of *-τερ-* for *-τρ-* after the analogy of the strong stem-endings and vice versa *πατρί*, *θύγατρα*, *θύγατρες*.

Like *πατήρ* was also declined *γαστήρ*. The regular inflection of *ἀνήρ* was *ἀνήρ*, *ἀνερ*, *ἀνέρα*, *ἀνδρός*, *ἀνέρι*; *ἀνέρε*, *ἀνδροῖν*; *ἀνέρες*, *ἀνδρας* or *ἀνέρας*, *ἀνδρῶν*, *ἀνδράσι*. *-νρ-* regularly became *-νδρ-* (§ 152) in the weak stem-forms. *ἀνέρος* for *ἀνδρός* was formed after the analogy of forms like *ἀνερ*, *ἀνέρα*; and similarly *ἀνδρα*, *ἀνδρί*, *ἀνδρε*, *ἀνδρες* after forms like *ἀνδρός*, *ἀνδρῶν*.

δᾶήρ (voc. *δᾶερ*), *φράτηρ*, *ἀήρ*, *αιθήρ*, *ἀθήρ* and *ἀστήρ* generalized the strong stem-endings *-τερ-*, *-ερ-* in all the oblique cases, as gen. *δᾶέρος*, *φράτερος*, *ἀέρος*, *αιθέρος*, *ἀθέρος*, *ἀστέρος*, but dat. pl. *ἀστρασι*.

§ 361.

Singular.

Indg.

Nom.	<i>-tēr</i> , <i>-tōr</i> { ·tē, ·tō-	<i>δοτήρ</i>	<i>δώτωρ</i>		dator
				<i>dātā</i>	
Voc.	<i>-ter</i> , <i>-tor</i>	<i>δοτήρ</i>	<i>δώτωρ</i>	<i>dātar</i>	dator
Acc.	<i>-ter-ŋ</i> , <i>-tor-ŋ</i>	<i>δοτῆρα</i>	<i>δώτωρα</i>	<i>dātāram</i>	datōrem
Gen.	<i>-tros</i> , <i>-es</i>	<i>δοτῆρος</i>	<i>δώτωρος</i>	<i>dātūr</i>	datōris
Dat. (=loc.)					
	<i>-ter-i</i> , <i>-tor-i</i>	<i>δοτῆρι</i>	<i>δώτωρι</i>	<i>dātāri</i>	datōre

Dual.

Nom. Voc. Acc.

-ter-e, -tor-e δοτῆρε δώτορε (dātārāu)

Gen. Dat.

? δοτήροιν δωτόροιν

Plural.

Nom. Voc. -ter-es, -tor-es δοτῆρες δώτορες dātārah̄ datōrēs

Acc. -tr-ns δοτῆρας δώτορας (dātfn) datōrēs

Gen. -tr-ōm δοτήρων δωτόρων (dātñām) datōrum

Dat. (=loc.)

-tr-su δοτῆρσι δώτορσι dātřšu

On the levelling out of the ablaut-grades -τηρ-, -τορ- see § 359. On the ending of the nom. singular in Sanskrit see § 360. The -ā- in Skr. dātāram, *giver*, dātārāu, dātārah̄ is of the same origin as in rājānam (§ 345). Beside the gen. case-endings -os, -es the parent Indg. language had also -s (§ 302) which occurs in dātūr, pitūr; -ṛs regularly became -ur through the intermediate stages -ṛš, -ṛž, -ṛr. The acc. and gen. plural dātfn, pitfn, dātñām, pitñām were new formations after the analogy of the i- and u-declensions (Thumb, *Handbuch des Sanskrit*, § 302). The regular forms would have been *dātrah̄, *pitrah̄, *dātrām, *pitrām. The old gen. was preserved in Vedic narām = ḏvñdrām.

§ 362. It is difficult to account satisfactorily for Att. Ion. χείρ and the inflected forms, because it is not certain what was the original stem. The most probable explanation is that beside the stem χερ- there once existed a stem χερι- with nom. acc. dual χείρε from *χεργε. From the dual a new nominative singular Att. Ion. χείρ was formed. Att. then generalized the -ει-, as χείρα, χειρός, χειρί; χείρες, χείρας, χειρῶν, but χεροῖν, χερσὶ from stem χερ-. And Ion. generalized the stem χερ-, as χέρα, χερός, χερί;

$\chi\acute{e}p\acute{e}s$, $\chi\acute{e}p\acute{a}s$, $\chi\acute{e}p\hat{\omega}n$, $\chi\acute{e}p\sigma\acute{i}$, but Hom. $\chi\acute{e}rpe\sigma i$, $\cdot\epsilon\sigma\sigma i$ from $\chi\acute{e}ip\cdot$. The nom. $\chi\acute{e}ps$ in Timocreon 9 was, like Att. $\mu\acute{a}rp\tau u\acute{s}$ from $*\mu\acute{a}rp\tau u\acute{s}$, a new formation after the analogy of the nominatives in $\cdot s$.

6. S-STEMS.

§ 363. The s-stems contain masculine, feminine and neuter nouns and adjectives. They can be conveniently divided into five sub-divisions : (a) The large class of neuter nouns with the ablaut-grades $\cdot es\cdot$, $\cdot os\cdot$. (b) Nouns and adjectives of the type $\delta\nu\sigma\mu\epsilon\nu\acute{h}\sigma$. (c) Nouns with the ablaut-grades $\cdot\bar{o}s\cdot$, $\cdot\bar{o}s\cdot$. (d) The comparative of adjectives with the ablaut-grades $\cdot jes\cdot$, $\cdot jos\cdot$, $\cdot j\bar{o}s\cdot$. (e) Neuter nouns with the stem-ending $\cdot es$.

a. NEUTER STEMS IN $\cdot es\cdot$, $\cdot os\cdot$.

§ 364. To this sub-division belongs a large number of nouns in Greek, Sanskrit and Latin. In the Germanic languages nearly all of them went over into other declensions. They originally had either the strong grade of ablaut in the root and the weak in the stem-ending or the weak grade in the root and the strong in the stem-ending. A comparison of the forms in the various languages shows that this original distinction must have become obliterated during the prim. Indg. period by the ablaut-grade $\cdot es\cdot$ being levelled out into all the inflected forms.

Singular.

Indg.

Nom. Voc. Acc.	$\cdot os$	$\gamma\acute{e}v\acute{o}s$	jánah, race	genus
Gen.	$\cdot es\cdot os$, $\cdot es$	$\gamma\acute{e}v\acute{e}os$, $\gamma\acute{e}v\acute{o}us$	jánasah	generis
Dat. (=loc.)	$\cdot es\cdot i$	$\gamma\acute{e}v\acute{e}i$, $\gamma\acute{e}v\acute{e}ii$	jánasi	genere

Dual.

Nom. Voc. Acc.	$\cdot es\cdot i$, $\cdot \bar{i}$	$\gamma\acute{e}v\acute{e}i$, $\gamma\acute{e}v\acute{e}ee$	jánasí
Gen. Dat.	?	$\gamma\acute{e}v\acute{e}o\bar{u}v$, $\gamma\acute{e}v\acute{e}eo\bar{u}v$	

Plural.

Nom. Voc. Acc.	-es-ə, -ōs-ə	γένεα, γένη (jánāsi)	genera
Gen.	-es-ōm̄	γενέων, γενῶν jánasām	generum
Dat. (=loc.)	-es-su	γένεστι, γένεσι jánahsu	

Intervocalic **-s-** disappeared in prim. Greek (§ 213, 2), but became **-r-** in Latin. In Sanskrit **-es-** and **-os-** regularly fell together in **-as-** (§ 42). The Ionic uncontracted and the Attic contracted forms correspond to the Indg. stem- and case-endings except **γένει** and **γένεε**. The **-i** in the Ionic trisyllabic form **γένει** was due to the influence of datives like **πόδι**. The dual **γένει** represents an older **γένεε** which is common in manuscripts. **γένεε** from older ***γένεσε** had **-e** after the analogy of forms like **δυσμενέε**, **πόδε**. Hom. has **γένεστι** beside **γένεσι** (§ 212, 2). After the analogy of **γένεστι** the ending **-εστι** became used to form the dative plural of **i**-, **u**-, and of all kinds of consonantal-stems. In Homer even forms like **ἐπέεστι** occur owing to the stem being regarded as **ἐπέ**. Sanskrit **jánāsi** (with nasalized **-ã-**) was a new formation after the analogy of the nt-stems. The regular form would have been ***jánāsi** or ***jánasi**. **jánahsu = jánassu**.

§ 365. Att. **φῶς**, *light* = Hom., &c. **φάος** from ***φαῖος**, gen. **φάοντος** from ***φαῖοστος**, Hom. dat. **φάει** from ***φαῖεστι**, nom. pl. **φάεα** from ***φαῖεσσα**. The other cases were formed after the analogy of the dental stems, as **φωτός**, **φωτί**, pl. **φῶτα**, **φῶτων**.

There seems to have been in prim. Greek two forms for the word *ear*, **οὖς** from ***օδος**, older ***ούστος** and Dor. Ion. **ѡς** from Indg. ***ō(u)s** (§ 63). Hom. **οὐατος**, **οὐατα**, **οῦασι**, from ***ούστατος**, &c. after the analogy of the stems in **-μα** (§ 350), and Attic, &c. **ѡτός**, **ѡτί**, pl. **ѡτα**, **ѡτων**, **ѡσι** (also Hom.) from the form **ѡς** after the analogy of the dental stems. **οὖς**, **οὐατος**, &c. had the smooth for the rough breathing after the analogy of **ѡς**, **ѡτός**, &c. See § 219.

b. δυσμενής.

§ 366. Nouns and adjectives of the type δυσμενής, *ill-affected, hostile*, Skr. *durmanāḥ*, *dispirited*, only exist in Greek and Sanskrit. And originally they occurred only in compounds. Simple forms like μιγῆς, φραδῆς, ψευδῆς beside συμμιγῆς, ἀφραδῆς, φιλοψευδῆς were back-formations made direct from the compounds. These compounds are closely related to the neuter stems in -es-, -os-, the -es- having become generalized in the parent Indg. language, cp. ἀμενῆς, δυσμενῆς, εὐμενῆς : μένος, εὐγενῆς : γένος, ἀψευδῆς : ψεῦδος.

Singular.

Indg.

Nom.	-ēs	δυσμενῆς	durmanāḥ
Voc.	-es	δυσμενές	durmanāḥ
Acc.	-es-ṁ	δυσμενέα, -ῆ	durmanasam
Gen.	-es-os, -es	δυσμενέος, -οῦς	durmanasaḥ
Dat. (=loc.)	-es-i	δυσμενεῖ, -έῃ	durmanasi

Dual.

Nom. Voc. Acc.	-es-e	δυσμενέε, -εī	(durmanasāu)
Gen. Dat.	?	δυσμενέοιν, -οῖν	

Plural.

Nom. Voc.	-es-es	δυσμενέες, -εīs	durmanasaḥ
Acc.	-es-ŋs	δυσμενέας	durmanasaḥ
Gen.	-es-ōm	δυσμενέων, -ῶν	durmanasām
Dat. (=loc.)	-es-su	δυσμενέσι	durmanasaḥsu

The intervocalic -s- regularly disappeared (§ 213, 2). The -ῆς of the nom. singular is a lengthening of the stem-ending -es-. It is improbable that the original ending was -ēs-s-. The ī in δυσμενεῖ is of the same origin as in γενεῖ (§ 364). Apart from the dat. plural all the other forms

both contracted and uncontracted represent the original stem- and case-endings. *δυσμενέσι*, older *δυσμενέσσι*, on the final *-ι* of which see § 316. In Attic the nom. plural was used for the accusative. In Attic the compounded proper names in *-κράτης*, *-μένης*, *-σθένης*, *-φάνης* and also other compounds often had *-ην* in the accusative after the analogy of the masculine ā-declension. This also occurred occasionally in the Ionic, Aeolic, Cretan, Arcadian and Cyprian dialects. And in like manner the Attic genitive, and more rarely the dative, were sometimes formed after the analogy of the ā-declension. The Lesbian voc. gen. and dat. endings *-ε*, *-η*, *-η̄* were also similar analogical formations.

§ 367. The original ending of the nom. voc. and acc. neuter singular was *-es*, as in *δυσμενές* = Skr. *durmanah*; and of the plural *-es-e* as in *δυσμενέα*, *-η̄*.

c. STEMS IN *-ōs*, *-os-*.

§ 368. These nouns had originally the ablaut-grades *-ōs*, *-os-*, but the *-os-* became generalized in prim. Greek in the inflected forms. Nouns of this type occur only in Greek, Latin and Sanskrit.

Nom. *γέλως*, *ἔρως*, *ἰδρώς*, *αιδώς*, voc. *αιδοῖ* for **aiðos* after the analogy of *πειθοῖ* (§ 341), acc. *αιδῶ* from **aiðoσa*, Hom. *ἰδρῶ*, gen. *αιδοῦς* from **aiðoσos*, dat. *αιδοῖ* from **aiðoσi*; and similarly acc. *αιῶ* from **aifoσa* beside *αιῶνα* : nom. *αιόν*, gen. *αιῶνος*. Cp. O.Lat. *arbōs*, *arbōrem* beside *honōs*, *honōrem* with *-ō* of the nom. levelled out into the oblique cases. *γέλως*, *ἔρως* and *ἰδρώς* were generally declined after the analogy of the dental stems (§ 342), gen. *γέλωτος*, *ἔρωτος*, *ἰδρῶτος*; also Att. acc. *γέλων*, Hom. dat. *γέλῳ*, *ἰδρῷ* after the analogy of the o-stems (§ 327), acc. *γέλω* after the analogy of the ōu-stems (§ 340).

Hom. *ἡώς* from **āusōs*, cp. Skr. *uṣáḥ*, *dawn*, Lat. *aurōr-a* from **āusōs-ā* with *-ā* from the ā-declension, voc.

ἡοῖ after the analogy of *πειθοῖ* (§ 341), acc. *ἡῶ* from **ἥσσα*, Skr. *uśásam*, gen. *ἥσ्स* from **ἥसσ*, Skr. *uśásah*, dat. *ἥοī* from **ἥस्स*, Skr. *uśási*. Attic *ἔως* from *ἥώς* (§ 71) went over into the so-called Attic second declension (§ 327).

d. THE COMPARATIVE OF ADJECTIVES.

§ 369. One of the numerous ways of forming the comparative of adjectives in the parent Indg. language was by means of a suffix with the ablaut-grades *-jes-*, *-jos-*, *-jōs-*, *-is-*. The grades *-jes-* and *-jos-* regularly fell together in *-jas-* (§ 42) in Sanskrit. In Latin *-jos-* only occurs in the nom. voc. and acc. neuter, as O.Lat. *majos*, later *majus*. In all the other forms of the masculine, feminine and neuter *-jōs-*, which originally belonged only to the masculine nom. singular, became generalized, as O.Lat. *majōs*, *noviōs*, acc. *majōrem*, *noviōrem*. In Greek *-jes-*, *-jōs-* do not occur at all, and *-jos-* only occurs in three forms, viz. in the acc. singular masculine and feminine, as *μείζω*, Ion. *μέζω* from **μέγյօσα*, Indg. **mégjosm*, masc. and fem. nom. plural *μείζους*, *μέζους* from **μέγյօσες*, neut. nom. acc. plural *μείζω*, *μέζω* from **μέγյօσα* with *-a* = Indg. *ə*. See § 375.

e. NEUTER STEMS IN *-əs-*.

§ 370. Nouns of this type are found only in Greek and Sanskrit. *-əs-*, Gr. *-as-*, Skr. *-iś-* is the weak grade of the *-os* in paragraph 368, but the *-əs-* grade became generalized already in the parent Indg. language.

Singular.

Indg.

Nom. Voc. Acc.	<i>-əs</i>	<i>γέρας</i>	<i>havīḥ, oblation</i>
Gen.	<i>-əs·os</i> , <i>-es</i>	<i>γέραος, γέρως</i>	<i>havīśah</i>
Dat. (= loc.)	<i>-əs·i</i>	<i>γέραι, γέραι</i>	<i>havīši</i>

Dual.

Nom. Voc. Acc.	-əs-i, -ī	γέραε, γέρā	havíši
Gen. Dat.	?	γεράοιν, γερᾶν	

Plural.

Nom. Voc. Acc.	-əs-e	γέραα, γέρā	(havíši)
Gen.	-əs-ōm̄	γεράων, γερῶν	havíšām̄
Dat. (=loc.)	-əs-su	γέραστι, γέρασι	havíhšu

The dat. γέραι and dual γέραε, γέρā were new formations of the same kind as in γένει and γένει, γένεε (§ 364). On the -i in γέραστι see § 316. The remaining Ionic uncontracted and the Attic contracted forms are normally developed from the corresponding Indg. stem- and case-endings. But most of the nouns belonging to this class were also declined after the analogy of the stems in -μα (§ 350), as πέρατος, τέρατος, κέρατος from *κέραατος, pl. πέρατα, τέρατα, κέρατα. Poetic forms like Hom. οὐδεος, οὐδεϊ, οὐδει; κέρεος, κέρεϊ, pl. κέρεα; Att. βρέτεος, pl. βρέτη, βρετέων were formed after the analogy of the corresponding cases of γένος (§ 364). The -ă in the nom. acc. plural of forms like γέρă, κρéă beside the regular forms γέρā, κρéā was due to the analogy of the nom. acc. of other consonantal stems. It is difficult to explain datives like κρέă, γήρă which occur in Attic texts. They seem to be new formations after the analogy of the dat. of the ā-declension, but it is not clear how the change could have come about.

THE r- : n-DECLENSION.

§ 371. The parent Indg. language had a declension of neuter nouns which consisted of the blending of two stems. The stem of the nom. and acc. singular generally ended in one of the ablaut-grades -er (Skr. -ar, Lat. -er); -ōr (Gr. ὥρ); and -r (Gr. -αρ, Lat. -ur), but also occasionally in -r + a consonant, as Skr. áhar, day, údhar, udder, Lat. iter; ἔλωρ, πέλωρ, ὑδωρ; ἦπαρ, οὐθαρ, Lat. femur, jecur; Skr.

yákr̥t, *heart*, *ásṛk*, *blood*. The stem of the oblique cases ended in *-n* or *-ṇ*, as gen. Skr. áhn-āḥ, údhn-āḥ, udn-āḥ, *of water*, Gr. ἡπατός, ὕδατος, Lat. *feminis*, *itinis, *jecinis (*femoris*, *iteris*, *itineris*, *jecoris*, *jecinoris* were analogical formations through the mixing of the two stems); Skr. jakn-āḥ, asn-āḥ.

This declension was best preserved in Sanskrit and Greek, in the other languages one or other of the stems mostly became generalized, as in Lat. *über*, OE. *ūder*, *udder*; OE. *wæter* beside Goth. *watō* (dat. *watin* = Skr. *udáni*), *water*; and similarly in the three Greek words *ἔαρ* from **ϝεσαρ* (gen. *ἔαρος*), Lat. *vēr*; *πῦρ*, gen. *πυρός* beside Goth. *fōn*, *fire*, gen. *funins*; *θέναρ*, gen. *θέναρος*.

Many of the words belonging to this declension are found in Greek only in the nom. and acc. singular, as *ἄλκαρ*, *εἴλαρ*, *ἔλωρ*, *ὄναρ*, *πέλωρ*, *πῖαρ*, *τέκμαρ*, *τέκμωρ*, *ὕπαρ*. Inflected forms of the following nouns occur, all of which were formed after the analogy of the stems in *-μα* (§ 350): *ἄλεαρ*, from **ἀλεϝαρ*, *ἄλειφαρ*, *δέλεαρ* from **δελεϝαρ*, *εἴλαρ* from **ἐδϝαρ*, *ἡμαρ*, *ἥπαρ*, Hom. *ὅνειαρ* read *ὄνηαρ* from **ὄναϝαρ*, *οὐθαρ*, *πείραρ* from **περϝαρ*, *σκῶρ*, *στέαρ*, *ύδωρ*, *φρέαρ* from **φρηϝαρ* (cp. § 72).

Many attempts have been made to explain the origin of this declension, but none of them are satisfactory. The original inflexions were better preserved in Vedic than in classical Sanskrit. The declension of Vedic *áhar*, *day* and Greek *ἥπαρ* will serve as models for all nouns belonging to this class. The stem- and case-endings of the inflected forms in both languages correspond to those of the neuter *n*-declension (§ 350).

Singular.

Nom. Voc. Acc.	<i>ἥπαρ</i>	<i>áhar</i>
Gen.	<i>ἥπατος</i>	<i>áhnah</i>
Dat. (= loc.)	<i>ἥπατι</i>	<i>áhani</i> , <i>áhan</i>

Dual.

Nom. Voc. Acc.	<i>ἥπατε</i>	áhanī
Gen. Dat.	<i>ἥπάτοιν</i>	

Plural.

Nom. Voc. Acc.	<i>ἥπατα</i>	áhāni
Gen.	<i>ἥπάτων</i>	áhnām
Dat. (= loc.)	<i>ἥπασι</i>	áhasu

CHAPTER X

ADJECTIVES

A. THE DECLENSION OF ADJECTIVES

§ 372. The development of grammatical gender in nouns was older than in adjectives, but adjectives had before the close of the prim. Indg. period come to be inflected for number, gender and case like nouns. At an earlier period there must however have been a stage when the bare stem of the adjective was used along with the noun without anything to indicate its number, gender and case, something like Modern English which has got rid of the superfluous luxury of inflexion and gender. After the *ā*-stems of nouns had become characteristic of the feminine gender, and the *o*-stems of the masculine and neuter genders (§ 295), the adjectival *o*-stems began to have inflexions for number, gender and case after the analogy of such nouns when used along with them as attributes. Nouns of the type *γόνος* : *γονή*, *τόμος* : *τομή* with like meaning in both genders, and words like **ékwos*, Lat. *equus* : **ékwā*, Lat. *equa*, were probably also an important factor in the development. At a still later period the adjectives of the type *-os*, *-ā*, *-om* (*-os*, *-ā*, *-η*; *-ov*, Skr. *-ah*, *-ā*, *-am*, Lat. *-us*, *-a*, *-um*) came to be used along with nouns belonging to the *i*-, *u*-, diphthongal- and consonantal-declensions. The

development of the feminine gender in the other adjectival stems went parallel with the formation of the feminine gender in the corresponding substantival stems, i. e. they were formed after the analogy of the jā-stems (§ 322). The adjectives of this type then acquired the gender and inflexion of the corresponding masculine and neuter nouns and became used along with all kinds of nouns.

§ 373. In Greek the adjectives are declined like the corresponding nouns, but as we have seen above the feminine of the u-, n. and nt-stems is declined like a jā-stem. There is however a large number of adjectives in Greek, which has only one ending (-os) for the masculine and feminine. The adjectives of this type are partly compound and partly simple. They were originally nouns, denoting living beings possessing the characteristic implied in the word, which later came to be used as adjectives, as *ροδοδάκτυλος*, lit. *a man with rosy fingers*; *θῦμοβόρος*, lit. *soul-devourer*; *λάλος*, lit. *a chatterer, babbler*; *ησυχος*, lit. *a quiet, gentle kind of man*; and similarly *έκηλος*, *ήμερος*, *ΐλαος*, *λάβρος*, *λοίδορος*, &c. After the analogy of such adjectives, simple adjectives which were not originally nouns denoting living beings came to have only the two endings, -os, -ov, as *έωλος*, *νύκτερος*, *χέρσος*, &c. The gender of compound nouns was determined by the second element. When such compound nouns came to be used attributively in apposition to other nouns (cp. John Lackland) they became adjectival and were inflected like ordinary adjectives, except that they preserved their original masculine ending when used along with a feminine noun, as *ροδοδάκτυλος ήώς*; and similarly neuter compounds like **καλλίσφυρον*, *beautiful ankle*, when they became adjectives, had -os for both the masculine and feminine. But when the second element of the compound was originally an adjective, it regularly had the three endings. The adjectives of this type had sometimes however only two endings after the analogy of

the first type. The compound adjectives in *-ῆς* like *δυσμενῆς* (§ 366) never had different forms for the masculine and feminine. On the simple adjectives like *μιγῆς*, *φραδῆς*, *ψευδῆς*, see § 366.

NOTE.—The inflexion of contracted adjectives like *ἀπλοῦς* from *ἀπλός* was regular in the masculine and neuter except in the nominative and accusative neuter plural. The feminine *ἀπλῆ* (for **ἀπλῶ* from *ἀπλόη*), &c. and *ἀπλᾶ* (for **ἀπλῶ* from *ἀπλόα*) were formed after the analogy of forms like *σοφή*, &c. and *σοφά*.

§ 374. In the following adjectives the declension is made up of the blending together of two different stems : nom. acc. masc. sing. *πολύς*, *πολύν*, neut. *πολύ*, stem *πολύ-*, and fem. nom. sing. *πολλή* from **πολ(F)jā*, gen. *πολλῆς* from **πολ(F)jās*, from which was formed a masc. and neut. stem **πολ(F)jo-* = *πολλο-* for all the other forms of the masculine and neuter. The old forms of the *u*-stem were preserved in Hom., as *πολέος*, *πολέες*, *πολέας*, *πολέσι*. And similarly nom. acc. masc. sing. *μέγας*, *μέγαν*, neut. *μέγα*, and fem. nom. sing. *μεγάλη* from which was formed a masc. and stem *μεγάλο-* for all the other forms of the masculine and neuter.

B. THE COMPARISON OF ADJECTIVES

i. THE COMPARATIVE DEGREE.

§ 375. The parent Indg. language had several suffixes by means of which the comparative degree was formed. But in the individual branches of the parent language one of the suffixes generally became more productive than the rest, and in course of time came to be the principal one from which the comparative was formed, the other suffixes only being preserved in isolated forms.

The oldest and most original mode of forming the comparative of adjectives in prim. Indo-Germanic was by

means of the suffix **-jes-** with the ablaut-grades **-jos-**, **-jōs-** and **-is-**, which was added direct to the root-syllable. The root-syllable originally had the strong grade of ablaut. This suffix became the normal one in Latin for the formation of the comparative (§ 369), but in Greek and the Germanic languages it practically remained unproductive. In the oldest Sanskrit it was more productive than in the later language. In classical Sanskrit only a limited number of comparatives occur with this suffix. **-is-** the weak grade form of the suffix occurs in Latin adverbs like *magis*, *nimis*, *satis*, and in Gothic adverbs like *mins*, *less*, *waírs*, *worse*, from **menniz*, **wirsiz*. **-jes-**, **-jōs-** do not occur at all in Greek, and **-jos-** only occurs in three forms of the declension, viz. in the masc. and fem. acc. singular, as *μείχω*, Ion. *μέχω* from **μέγγοσα*, Indg. **méǵ̑josm̑*, masc. and fem. nom. plural *μείχους*, *μέχους* from **μέγγοσες*, and neut. nom. acc. plural *μείχω*, *μέχω* from **μέγγοσα*. And similarly *βάσσω*, *βράσσω*, *γλύσσω*, *ἐλάσσω*, *ἥττω* (*ἥσσω*), *θάσσω*, *κρέσσω*, *μάσσω*, *πάσσω*. From these and similar forms a new nom. *μέξων*, *μέξον*, *βάσσων*, *βάσσον* was formed after the analogy of *ἥδιων*, *ἥδιον* : *ἥδιω*, which then came to be declined like *ἥδιων*. Why the stem-vowel was long in Att. *μείξω*, *κρείττω*, *ἐλάττω*, *θάττω*, but short in the corresponding Ionic forms, is still an unsolved problem. Beside the suffix form **-jes-**, **-jōs-** there was also in prim. Indg. the suffix form **-i-jes-**, **-i-jōs-**, the *i*, *ī* of which stood in ablaut relation to each other. The *ī* was preserved in Greek, but Sanskrit generalized the *ī*, as Skr. **svádiyas-**, *sweeter*; masc. and fem. acc. singular *ἥδιω*, masc. and fem. nom. plural *ἥδίους* (also used for the acc.), neut. nom. acc. plural *ἥδιω*, from **σfādījōsa*, **σfādījōses*, **σfādījōsa*, beside *καλλίω* from **καλλījōsa*, *ἔχθīω*, *ρῆīω*. All the other forms of the declension in Greek were formed from the weak grade **-is-** + an n-suffix with the ablaut-grades **-en-**, **-on-**, **-ōn** (§ 345), as *ἥδιων*, *ἥδιονα*, *ἥδιονος*, neut. *ἥδιον*,

from *σφᾶδισων, *σφᾶδισονα, *σφᾶδισονος, *σφᾶδισον, pl. ήδίονες, neut. ήδίονα, from *σφᾶδισονες, *σφᾶδισονα; and similarly in Goth. masc. nom. sūt·iz·a, *sweeter*, acc. sūt·iz·an, gen. sūt·iz·ins. The -i- was generally long in Attic poetry and short in Doric and the old epic poetry. This fluctuation between the long and short -i- was due to the levelling out of i or ī in the forms where it was regular, as in ήδίω, ήδίους beside ήδίων, ήδίονα, &c., ἐχθίω, καλλίω, ρηγώ. The feminine of this type of comparative was originally formed as a jā-stem (§ 322), as Skr. náv·jasī, *newer*, gár·iyasī, *heavier*, but in Greek and Latin the masculine became also used for the feminine.

NOTE.—From what has been said above it will be seen that the Greek declension of words of the type ήδίων is made up of the two different stem-forms *σφᾶδ-īōs- and *σφᾶδ-ισ-ov-, which originally had different meanings. The former denoted the adjectival form of the comparative, *sweeter*, and the latter the substantival, *the sweeter*. But this original distinction in the meaning of the two stem-forms was obliterated in prim. Greek whereby the substantival form became adjectival. And similarly in the Germanic languages, as Goth. sūt·iz·a (acc. sūt·iz·an, gen. sūt·iz·ins) which originally meant *the sweeter*.

§ 376. The secondary suffixes -ero-, -tero- were originally confined to words relating to place and to certain pronominal forms, as Skr. úparah, ádharaḥ, *lower*, Lat. s-uperūs, inferūs; Goth. unsar, our, izwar, your. Skr. katarah, πότερος, Goth. hrāþar, *which of two*; ήμέτερος, ὑμέτερος, Lat. noster, vester; Lat. exterus, dexterus. The suffix -ero- remained unproductive in all the languages. The suffix -tero- remained unproductive in Latin and the Germanic languages, but in Greek and Sanskrit it had become in the prehistoric periods of these languages the ordinary suffix for the formation of the comparative of adjectives. The -tero- was originally added to the ad-

verbal form, which in the i-, u- and consonantal-stems was identical with the neuter singular, as *ρητ-τερος*, *ιψι-τερος*; *γλυκύ-τερος*, *δέξι-τερος*; *μελάν-τερος*, *χαριέσ-τερος* from **χαριφεντ-τερος*; *πενέσ-τερος* from **πενετ-τερος*; *μακάρ-τερος*; *ἀληθέσ-τερος*, *εύμενέσ-τερος*; Skr. *śúci-tarah*, *purer*; *cáru-tarah*, *dearer*; *bhágavat-tarah* (stem *bhagavant-*), *more blessed*; *tavás-tarah*, *stronger*; *παλαιό-τερος*, *μεσαι-τερος* which at a later period came to be felt as being formed from *παλαιός*, *μέσος*, and then after the analogy of these were formed such comparatives as *γεραί-τερος*, *ἡσυχαί-τερος*, *ἰσαί-τερος*, *μυχαί-τερος*, *σχολαί-τερος*, *πλησιαί-τερος*. And in like manner from such comparatives as *χαριέσ-τερος*, *ἀληθέσ-τερος*, the -εσ-τερος was abstracted and used for forming comparatives like *σωφρον-έσ-τερος*, *εύδαιμον-έσ-τερος*, *ἀσμεν-έσ-τερος* : *ἀσμενος*, *εὐνούστερος* from **εύνο-εσ-τερος* : *εύνους*. And similarly from comparatives like *ἄχαρισ-τερος* : *ἄχαρις*, -ιτος, *γαστρίσ-τερος* : *γάστρις*, was extracted the -ισ-τερος, which became used for forming comparatives like *λαλ-ισ-τερος* : *λάλος*, *πτωχ-ισ-τερος* : *πτωχός*, *βλακ-ισ-τερος* : gen. *βλακός*, *κλεπτ-ισ-τερος* : *κλέπτης*.

In the ordinary formation of the comparative of o-stems, as in *ἀξιώ-τερος*, *σοφώ-τερος* beside *κουφό-τερος*, *πικρό-τερος*, *πονηρό-τερος*, *σεμνό-τερος*, *κενό-τερος*, *στενό-τερος* from older **κενfό-τερος*, **στενfό-τερος*, there is a difference of opinion among scholars about the explanation of the -ω- beside -ο-. Some scholars assume that the -ο- became -ω- in prim. Greek by rhythmic lengthening when the preceding syllable was short, but that it remained short when the preceding syllable was long by nature or position. Other scholars maintain, and probably rightly, that the comparative of o-stems was formed precisely in the same manner as in the other stems, that is, from the adverbial form which in the o-stems was originally the ablative (§ 303) of the adjective used adverbially and accordingly

ended in *-ω*. This explanation agrees with the formation of the comparative in the Germanic languages (cp. Goth. *swinþō-z-a* : *swinþs*, *strong*), where the *-ð-* can have no connexion with what is called rhythmic lengthening. It is therefore probable that all comparatives of *o*-stems had originally *-ω* irrespective of the quantity of the preceding syllable. The *-ω* only remained in those comparatives in which a succession of short syllables would have arisen by the substitution of *-o*. In other cases the comparative came to be formed direct from the *o*-stem of the adjective after the analogy of the *i*-, *u*- and consonantal-stems. Then the relation of *-ω* to *-o* gave rise to what is improperly called rhythmic lengthening.

2. THE SUPERLATIVE DEGREE.

§ 377. The superlative, like the comparative degree, was formed in the parent Indg. language by means of several suffixes. But in the individual branches of the parent language one of the suffixes generally became more productive than the rest, and in the course of time came to be the principal one from which the superlative was formed, the other suffixes only being preserved in isolated forms. The principal suffixes were :

1. ***-to***. which was only preserved in the formation of ordinal numerals, as *éktos*, Skr. *śaśtháḥ*, Lat. *sextus*, Goth. *saihsta*, *sixth*; *δέκατος* from **dekm̥tos*.

2. ***-is-to***. This suffix is made up of *-is*. the weak grade of the comparative suffix *-jes-* (§ 375), as in Lat. *magis*, and the *-to* which occurs in ordinal numerals like *éktos*, &c. In the comparative the root-syllable originally had the strong grade of ablaut, but in the superlative the weak grade with the accent on the ending of the suffix *-is-to-*, cp. *κρείσσων*, *δλείξων* (inscriptive form) beside *κράτιστος*, *δλίγιστος*. This original distinction became almost entirely obliterated in Greek and Sanskrit by analogical formations.

The suffix disappeared completely in Latin, but became productive in the Germanic languages, and also in Greek and Sanskrit for those adjectives which had *-ων*, *-ιων*, *-ι(y)as-* in the comparative, as *μείζων*, *μέγων* : *μέγ-ιστος* = Skr. *máhiyas-* : *máh-iṣṭah*; *ἡδίων* : *ηδ-ιστος* = Skr. *svádīyas-* : *svád-iṣṭhaḥ*, Goth. *sūt-ists*, *sweetest*.

3. *-m̥-o-*, *-m̥-o*, which like *-to-* appears chiefly in ordinal numerals, as Skr. *daśamáḥ*, Lat. *decimus*, from **dekm̥-os*, *tenth*; Lat. *summus* from **sup-mos*, *infimus*; Skr. *upamáḥ*, *uppermost*; *adhamáḥ*, *lowest*; Goth. *fruma*, *first*; *innuma*, *innermost*. It remained unproductive in Greek, and almost so in Latin, Sanskrit and the Germanic languages. *-m̥-o-* would have become *-αμ-ο-* (§ 65, 2) in Greek, but it was supplanted by the *-atos* in *ἐνατος*, *δέκατος*, from **newntos*, **dekm̥tos*, as *ἔσχατος*, *μέσσατος*, *νέατος*, *ὑπατος*. This change of *-αμ-ο-* to *-ατ-ο-* was doubtless also partly due to the influence of the suffixal ending *-to-*.

4. *-tm̥-o-* which appears in ordinal numbers, as Skr. *saptamáḥ*, Lat. *septimus*, from **septm̥-os*, *seventh*. Skr. *ántamah*, *next*; *uttamáḥ*, *highest, best*. In Latin and the Germanic languages it was only preserved in isolated forms, as Lat. *intimus*, *extimus*, *ultimus*, *optimus*, *dextrimus*; Goth. *aftuma*, *next, posterus*; *iftuma*, *the following, next*. In Sanskrit it was productive and became the regular superlative ending *-tama-ḥ* to adjectives which formed their comparative in *-tara-ḥ* (§ 376), as *cárutaraḥ*, *dearer* : *cárutamah*; *tavástaraḥ*, *stronger* : *tavás-tamah*. *-tm̥-o-* would have become *-ταμ-ο-* in Greek, but *-ταμ-ο-* became *-τατ-ο-* in the prehistoric period of the language through the influence of forms like *ἐνατος*, *δέκατος* and the *-το-s* in the superlative ending *-ιστο-s*. *-τατ-ο-* then became the ordinary superlative suffix for adjectives which had *-τερο-* in the comparative.

3. IRREGULAR COMPARISON.

§ 378. It is a peculiarity of all the Indg. languages that certain adjectives, especially those denoting *good*, *bad*, *great*, *small*, *much*, *little*, do not admit of a comparative and a superlative being formed directly from them. It is usually said that such adjectives are defective or that they form their comparatives and superlatives from a different root than the positive or that the comparatives and superlatives have no positives with which they are etymologically related. The real explanation is that such adjectives escaped from being brought into the grammatical system of comparison. In the early prim. Indg. period the comparative and superlative stood in no grammatical relation to the so-called positive. It was not until a relatively late period of the prim. Indg. language that the comparative and superlative came to be associated grammatically with what we call the positive. The forms in *-jes-* (§ 375) and *-is-to-* (§ 377, 2) originally partook of the nature of participles or verbal adjectives and denoted that the verbal action was especially prominent in the object with which they stood attributively, as Vedic *táriyas-*, *easily piercing through*, Gr. *φέριστος*, lit. *bringing best*. After such forms had also become purely nominal they were brought into relation with adjectives which were not comparative in form and which in regard to the comparative forms were called the positive. The forms in *-ero-*, *-tero-* (§ 376) were originally confined to words relating to place and to certain pronominal forms, and were primarily used to express contrast of comparison, as **upero-s*, *above and not below*, **ndhero-s*, *below and not above*, *δεξιτερό-s*, *the right and not the left* (*ἀριστερό-s*), *ἡμέτερο-s*, *our and not your* (*ὑμέτερο-s*), *θηλύτερο-s*, *feminine and not masculine* (Arcad. *ἄρρεντερο-s*). Then e.g. forms like **newotero-s* (*νεώτερος*), *new*, became used not only in contrast with **senotero-s*, *old*, but also

with the contrasted meaning *not so new, less new*, and then *older*. At this stage **senotero-s* became associated to **seno-s* (ένος). These formations thus came into the sphere of gradation which the -jes- forms already possessed and entered into competition with them. Although the two pairs of suffixes had originally different meanings, the difference entirely disappeared already in prim. Greek so far as the comparison of adjectives was concerned. After the three-membered series of gradation had been established in which the positive was regarded as the fundamental form, comparative and superlative forms began to be created from all kinds of adjectives, see Brugmann, *Grundriss*, &c., vol. ii (second ed.), pp. 654–60, and Delbrück in vol. iii, pp. 411–15.

ἀγαθός : ἀμείνων, ἀρείων, βελτίων, βέλτερος, κρείττων, κρείσσων, Ion. κρέσσων, φέρτερος, λώτων, λωίτερος : ἄριστος, βέλτιστος, βέλτατος, κράτιστος, κάρτιστος (: κρατύς), φέρτατος, φέριστος, λῷστος. ἀμείνων has the pure diphthong -ει- and therefore cannot be from *ἀμενήων. It is probably not a comparative in form. κρείττων, κρείσσων probably had -ει- from ἀμείνων.

κακός : χείρων from *χερσήων, χερείων from stem χερεσ-, cp. χέρης, χειρότερος, χερειότερος, ήττων, ήσσων : χείριστος, ήκιστος.

πολύς : πλείων with -ει- from the superlative, πλέων from stem πλε-, Att. πλεῦν (neut.) was a remodelling of *πλεῖς from *πλεῖς : πλεῖστος from *πλεῖσ-το-s.

μικρός : μείων, ἐλάττων, ἐλάσσων (: ἐλαχύς) : μεῖστος, ἐλάχιστος.

C. NUMERALS

I. CARDINAL.

§ 379. The cardinal numbers one to nineteen were adjectival, one to four being declinable and five to nineteen indeclinable, but in eleven to fourteen the units were

originally declined. The decades and the words for hundred and thousand were originally substantives.

§ 380. The parent Indg. language had several words with slightly different meanings to express the idea of *one*. In the ordinary Greek word for *one* four stem-forms are to be distinguished : ~

(a) *sem-. Masc. nom. Att. Ion. *εῖς*, Dor. *ῆς*, Cret. *ἕνς*, from *σεμς, neut. *ἕν* from *σεμ; masc. and neut. gen. *ἕνός* for *ἕμός with -ν- from the nominative (§ 346), and similarly, *ἕντι*, cp. Lat. *sem-per*.

(b) *som-. *ὁμός*, *one and the same*, Skr. *sama-*, Goth. *sama*, *same*.

(c) *sm̄-. *ἄμα*; *ἄ-παξ*, Lat. *sem-el*, Skr. *sa-kft*, *once*; *ἄ-πλοῦς*, Dor. *ἄ-τερος*; *έ-κατόν* and Att. *ἔ-τερος* for *ά-κατόν, *ά-τερος with ἔ- for ἄ- from *ἕν*. See § 290.

(d) *sm̄-. Fem. nom. sing. *míā* from *σμία (§ 322), cp. *μῶνυξ* for *σμῶνυξ, *having one hoof*.

Indg. *oinos, *oīnós*, *oīnή*, *oīnη*, *the ace on dice*, O.Lat. *oinos*, later *ūnus*, Goth. *áins*, OE. *ān*, *one*.

Indg. *oiwos, O.Pers. *aiva-*, *one*, *oīos*, *alone*, *by oneself*, Cypr. *oīfōs*, *alone*.

Fem. Hom. Iēsb. and Thessalian *īa*, Hom. gen. *iῆς*, dat. *iῆ*, and Hom. neut. dat. *iῶ* were probably of pronominal origin; cp. § 411.

§ 381. Indg. *duwō(u), *dwō(u) was inflected like a dual. Hom. δύω (indeclinable) from *δύϝω = Vedic duvá(u) beside *δϝω = Skr. dvá, in δώδεκα; gen. dat. δυoīn probably from a plural form *δυoīsiv. The original nom. acc. neuter was *duwoi = Vedic duvē, prim. Gr. *δυfōi which became δύo when the next word began with a vowel (§ 229). δύo then became generalized and indeclinable for all genders in Att. Dor. &c. and often also in Homer. In some dialects, e. g. in Herodotus, it became inflected like a plural just as in Latin and the Germanic languages, as Herod. δυῶν, δυoīsī, Ion. also δυῶν, δυσί after the analogy of τριῶν, τρισί.

Indg. *dwi-, *di- in compounds with ·i· after the analogy of *tri-, as in δί-πονς, Skr. dvi-pád-, Lat. bi-pēs, OE. twi-féte, two-footed.

§ 382. Masc. and fem. nom. Att. &c. τρεῖς, Cret. τρέες, Skr. tráyah, Lat. trēs, from *trejes; acc. Cret. τρίνς, Ion. Dor. Boeot. τρίς, Goth. þrins, from *trins, Att. τρεῖς like Lat. trēs was the nom. used for the accusative; nom. acc. neut. Indg. *trī, Vedic trí, on τρία, Lat. tria, Goth. þrija, see § 329; gen. τριῶν, Lat. trium, from *trijōm; dat. τρισί, Skr. triṣú, Lith. trisē.

Indg. *tri- in compounds, as τρί-πονς, Skr. tri-pád-, Lat. tri-pēs, OE. þri-féte, three-footed.

§ 383. The Indg. word for four had various grades of ablaut in the stem-ending of the different cases, as masc. nom. *qetwōres, Skr. catvárah, Lat. quattuor, Goth. fidwōr, Dor. and North-West Gr. τέτορες with -t- from τετρώκοντα (§ 386), Att. τέτταρες, Hom. τέσσαρες, Boeot. πέτταρες with -a- from the dative, Ion. τέσσερες for -opēs by assimilation, Hom. πίσυρες with -u- from the acc. and genitive; acc. masc. *qeturŋs, Skr. catúrah, Hom. πίσυρας; Att. τέτταρας with the first -a- from the dative; nom. acc. neut. *qetwora, Skr. catvári, Att. τέτταρα, Hom. τέσσαρα, Boeot. πέτταρα with -a- from the dative, Lesb. πέσσουρα, πίσυρα with -u- from the genitive; gen. *qeturōm, Lesb. πισύρων; Att. τέττάρων with -a- from the dative; dat. = (loc.) *qetwrsu, poet. τέτταροι from *τέτταροι, Att. τέτταροι.

Indg. *q(e)twṛ- beside *q(e)tru- in compounds, as in τετρά-χυγος from *τετφρα, τρά-πεξα, beside τρυ-φάλεια.

§ 384. Indg. *pénqe, πέντε, Skr. páñca; Aeol. πέμπε, Lat. quīnque, O.Ir. cōic, Goth. fimf, OE. fif, all with assimilation of consonants. In compounds πεντε- beside πεντα- with -a- from forms like ἑπτά, δέκα.

Indg. *s(w)eks = prim. Gr. *σφέξ, Lac. Féξ, beside *σέξ = Att. Ion. Dor. Boeot. &c. ēξ, Lat. sex, O.Ir. sē, Goth.

sáhs, Skr. शाश् with unexplained initial श्. In compounds एक्- beside एका- with -a- from एप्ट्रा, &c.

Indg. *septm̄, एप्ट्रा, Vedic saptá, classical Skr. sápta, Lat. septem, O.Ir. secht, Goth. sibun.

Indg. *oktō(u), which is dual in form, ओक्ट्रौ, Elean ὀκτώ after the analogy of एप्ट्रा, Lesb. Boeot. ὀκτό, probably like द्वौ the old neut. form, Skr. अष्टां(u), Lat. octō, Goth. ahtáu.

Indg. *nēwñ beside *énwñ, the former occurs in Skr. náva, Lat. novem with -m for -n after the analogy of septem, decem, cp. nōnus, Goth. niun, and the latter in Ion. εἰνά·νυχες, εἰνά·ετες, εἰνα·κόσιοι, from *éνfα-. ἐννέα has never been satisfactorily explained. Some scholars assume that it stands for *ἐν νεfα, lit. *nine in all*, and others that it arose from a contamination of *ἐνfα and *νεfα = Skr. náva. In compounds είνα- beside ἐννέα-, as in εἰνά·νυχες beside ἐννέα·μηνος.

Indg. *dekm̄, δέκα, Skr. dáśa, Lat. decem, O.Ir. deich, Goth. taíhun.

§ 385. In the cardinals eleven to nineteen the units originally preceded the decade, as in ἐνδέκα where ἐν- is the nom. acc. neuter, Lat. īn-decim from *oinom-decem, Skr. एकादशा ; δώδεκα (Hom. δυώδεκα) where δω- is the masc. form beside Hom. δύο καὶ δέκα (δυo-καίδέκα), Lat. duo-decim, Skr. dvā-daśa ; Lat. trē-decim from *trēs-decem, Skr. tráyō-daśa, but from thirteen onwards only with καὶ in Greek, as τρεῖς or τρία καὶ δέκα. But in Greek and Latin the units could follow the decade, as δέκα εἷς, δέκα δύο, δέκα τρεῖς, Lat. decem et īnus, decem et trēs, decem trēs, decem novem. δέκα δύο, δέκα τρεῖς, &c. were used when the substantive or a larger number preceded, but δυo-καίδέκα, τρεῖς καὶ δέκα when the substantive followed, as δραχμαὶ δέκα τρεῖς, but τρεῖς καὶ δέκα δραχμαὶ. The units in eleven to fourteen ceased to be inflected in the prehistoric period of most languages. A remnant

of the inflected forms of the units occurs in *τρισκαίδεκα* where *τρις*, prim. Gr. **τρινς*, is the masc. accusative.

§ 386. The Indg. word for *twenty* was a dual form **wi-k̥m̥ti*, lit. *both decades*. The expressions for *thirty* to *ninety* originally meant *three decades*, *four decades*, &c. The unit and the word for *decade*, a neuter substantive **k̥omt̥* from **dk̥omt̥* and related to **dék̥m̥*, *ten*, were both inflected so far as the units were declinable and governed the following substantive in the genitive case. Regular forms were: **tr̥i komt̥*, *thirty*; **qetw̥r̥a komt̥*, *forty*; **peŋqe komt̥*, *fifty*. Various new formations seem to have taken place already in the parent language, thus after the analogy of **tr̥i komt̥* were formed **qetw̥g̥ komt̥* = Ion. Dor. *τετρώκοντα* (§ 68), Lat. *quadrā-gintā*; **peŋqē komt̥* = *πεντήκοντα*, Skr. *pañcāśat*, the -η- of which was extended in Greek to *έξηκοντα*, *έβδομήκοντα*, Att. *όγδοήκοντα* (but Hom. *όγδω-κοντα* = Lat. *octō-gintā*), Hom. *έννηκοντα*, Att. Ion. also Hom. *ένενήκοντα*; and similarly in Lat. *quinquā-gintā*, *sexā-gintā*, *nōnā-gintā* with medial -ā- from *quadrā-gintā*.

Indg. **wi-k̥m̥ti*, Dor. Boeot. Elean, Pamphylian and Arcadian *fi-κατι*, Skr. *vī-śatih*, Lat. *vī-gintī*, O.Ir. *fiche*, *twenty*; Att. Ion. &c. *el-κοσι* from **efi-κοσι* with prothetic ε- and -o- for -a- after the analogy of the other decades. Att. &c. *τριά-κοντα*, Ion. *τριή-κοντα*, for **τριά-κοντα* after the analogy of *τετρώ*, *πεντή-κοντα*. The original form of the unit was preserved in Lat. *tr̥i-gintā*. The old neuter of the unit occurs in *τεσταρά*, *τετταρά*, Boeot. *πετταρά-κοντα*. It is difficult to explain why the Greek first element of the decades for seventy to ninety should contain the ordinal instead of the cardinal form of the unit. With *έννη-κοντα*, *ένενή-κοντα*, cp. Lat. *nōnā-gintā* beside masc. *nōnus* from **nowenos*. All the decades became adjectival in construction in prim. Greek.

§ 387. The Indg. word for *hundred* was **k̥mtóm*, lit.

a decade of tens, corresponding to Skr. शताम्, Lat. centum, O.Ir. cēt, Goth. hund, and -*κατόν* in ἕ-*κατόν*, lit. one hundred, with ἕ- for ḏ- after the analogy of ἐν. It was a neuter substantive, related to *dék̥m̥, ten, and governed the gen. case as in Sanskrit and the Germanic languages, but in Greek and Latin it had become adjectival in construction in the prehistoric period of the languages.

The hundreds from two to nine hundred were originally expressed in two ways. (a) Either both members were inflected for two, three and four hundred, and the second member only for the others, as in Skr. dvē शते = Indg. dual *dwoi k̥ntoi, Goth. twa hunda, two hundred; Skr. पाँचा शतानि, Goth. fimf hunda, five hundred; and similarly in the Keltic and the Baltic-Slavonic languages. (b) Or both members formed a compound without either of them being inflected, as in Skr. dvi-शताम्, two hundred, tri-शताम्, three hundred; O.Lat. du-centum auri, argentī ses-centum, but already at an early period the hundreds became plural adjectives and were inflected as such, as ducentī homines, ducentae mulieres. To this manner of forming the hundreds also belong the prim. Greek compound forms: *δι-κατον, *τρι-κατον, *τετρα-κατον, *πεντα-κατον, *έξα-κατον, *έπτα-κατον, *όκτω-κατον, *ένθα-κατον. When the second element of these compound nouns became adjectival in meaning there was formed beside *-κατον an adjectival form -κατιοι, -αι, -α = Dor. Boeot. -κατιοι, Arcad. -κασιοι, Att. Ion. Lesb. -κοσιοι with -ο- from -κοντα, and then various analogical formations took place in the first element of the compounds. τρι- became τριā, Ion. τριη- after the analogy of τριά-κοντα; δι- became διā, Ion. διη- after τριā-; and οκτω- became οκτα- after έπτα-, &c. The forms thus became Att. διā-κοσιοι, τριāκόσιοι, Ion. διηκόσιοι, τριηκόσιοι, τετρακόσιοι, πεντακόσιοι, έξακόσιοι, έπτακόσιοι, οκτακόσιοι, ένα-, είνα-κόσιοι.

§ 388. If we compare the word for *thousand* in the various languages we see that it is practically impossible to determine what was the original form of the word for *thousand* in the parent Indg. language, cp. Lat. neut. *mille*, O.Ir. fem. *mile*, Goth. fem. *þūsundi*, Lith. masc. *tūkstantis*, O.Slav. fem. *tysešta*, Skr. neut. *sa-hásram*, lit. *one thousand*, where *sa-* = Indg. *sm-* (§ 380), prim. Gr. neut. *χεσλον= Skr. *·hásram*, Indg. *gheslom. *χεσλον became adjectival in meaning in prim. Greek, and then from it was formed the adjectival form *χεσλιοι, -αι, -α = Ion. Boeot. χείλιοι, Lesb. χέλλιοι, Dor. χήλιοι, Att. χίλιοι, which corresponds in form to the Sanskrit adjective *sa-hasriya*.

2. ORDINAL.

§ 389. The ordinal numbers in the various languages were with few exceptions superlatives in form and were formed from the cardinal numbers with the same suffixes which we have already had in the formation of the superlative of adjectives (§ 377).

§ 390. The word for *first* was not related to the word for *one* in any of the languages, as πρώτος, Dor. πράτος either from *πρωθ-ατος with -atos from forms like τέτρατος, δέκατος and related to Skr. pūrvah, pūrvyāḥ, *prior, first*, or from *προ-ατος : πρό, Skr. prá, *before, in front of*; Lat. *primus* from *priṣ-mos : adv. *priṣ, *prius*, Goth. *fruma, prius, first*. Hom. πρώτιστος like Goth. *frumists* was a double superlative.

δεύτερος denoted originally *standing off from anything, at a distance from, inferior in rank* and is related to the verb δεύομαι and to Skr. dávīyah, *farther*; Skr. dvi-tiyah : dvi, *two*; Lat. secundus : sequor; Lat. alter, Goth. anþar, Lith. añtras all lit. meaning *the other* as compared with *one who is first*. δεύτατος with -atos as in τέτρατος.

τρίτος, Lesb. τέρτος=Lat. *tertius*, Goth. þridja. Hom.

τρίτ-ατος after the analogy of *τέτρατος*, *δέκατος*, and similarly Hom. *ἔβδόματος*, *όγδότας*.

τέταρτος from **τέτραπτος*, Hom. *τέτρατος*, Boeot. *πέτρα-*
τος, Skr. caturthāḥ, OE. fēo(w)e)rþa, Indg. *qetwṛtós.

πέμπτος (Cret. *πέντος* from **πενττος*, older *πέμπτος*,
cp. ἑττά = ἐπτά), Lat. *quintus*, OE. *fifta*, Lith. *peñktas*,
Indg. *peñqtós; Skr. pañcathaḥ beside pañcamáḥ.

ἕκτος, Skr. šašthāḥ, Indg. *s(w)ektós; Lat. *sextus* and
Goth. saíhsta were formed direct from *sex*, saíhs.

ἔβδομος (§ 107) probably for older **ἔβδαμος*, Skr. sapta-
máḥ, Lat. *septimus*, Indg. *septm-ós, *? sebdmós, Hom.
ἔβδόματος, see *τρίτος*.

όγδοος from **όγδοος* with the mediae -y-δ- after the analogy
of ? *ἔβδομος*, Skr. aṣṭamáḥ; Hom. *όγδότας*, see *τρίτος*.

ἐνατος, Hom. *εἴνατος* from **ἐνφατος*, Indg. *enwṇtós
beside Lat. *nōnus*, Skr. navamáḥ with -m- from dašamáḥ,
Indg. *newŋ-ós.

δέκατος (Lesb. Arcad. δέκοτος with -o- from -κοντα), Goth.
taíhunda, Indg. *dekm̥tós beside Skr. dašamáḥ, Lat.
decimus, Indg. *dekm̥-ós.

§ 391. The ordinals from eleventh to nineteenth could
be formed in two ways: (a) Either with the cardinal units
+ the ordinal for tenth, as *ένδέκατος*, *δωδέκατος* (Hom.
δυωδέκατος), these two forms were used in all the dialects;
and similarly in Lat. *ündecimus*, *duodecimus*, Skr. ēkā-
dašáḥ, dvā-dašáḥ or -dašamáḥ. In this way were also
formed the other ordinals in Ion. and Boeotian, as *τρισκαι-*
δέκατος, *τεσσερες-*, *τεσσαρακαιδέκατος*, *πεντεκαιδέκατος*,
έκκαιδέκατος, *έπτακαιδέκατος*, *όκτωκαιδέκατος*, *έννεακαιδέ-*
κατος; and similarly Skr. trayō-dašáḥ, *thirteenth*, catur-
dašáḥ, *fourteenth*, pañca-dašáḥ or -dašamáḥ, *fifteenth*, &c.
(b) Or with ordinals in both components, as *τρίτος καὶ*
δέκατος, *τέταρτος καὶ δέκατος*, &c.; and similarly Lat.
tertius decimus, quartus decimus, &c.; Goth. *fimfta-*
taíhunda, *fifteenth*, with the first element uninfllected.

§ 392. The original second element of the ordinals of the tens was **k^{mt}-tós* beside **k^{mt}-tm^o-ós*, the former occurs in Boeot. *fi-καστός* (§ 110), Att. *είκοστός* from **έπτικοστός* with the first *-o-* for *-a-* after the analogy of *τριάκοστός*, *-κοντά*. The other ordinals were formed in prim. Greek either direct from the stem of the corresponding cardinal *+ -tós*, thus **τριάκοντ + tós* became **τριάκοντός* (§ 110) and then later *τριάκοστός* (§ 158), or else with *-κοστός* for **-καστός* = Indg. **k^{mt}-tós*, with the first *-o-* for *-a-* after the analogy of *-κοντά*; and similarly *τεσσαρά*, *τετταρά*, *τετρωκοστός*, *πεντηκοστός*, *έξηκοστός*, *έβδομηκοστός*, *όγδοηκοστός*, *ένενηκοστός*; beside Lat. *vicēsimus*, *vīgēsimus*, *tricēsimus*, *trigēsimus*, *quadrāgēsimus*, *quīnquāgēsimus*, &c. = Skr. *vīśatitamáḥ*, *trīśattamáḥ*, *catvārjśattamáḥ*, *pañcāśattamáḥ*, &c., from Indg. **k^{mt}-tm^o-ós*.

§ 393. The ordinals of the hundreds were formed in prim. Greek from the corresponding cardinals with *-οστός* from the ordinals of the tens, as *έκατ-οστός*, *διάκοσι-οστός*, *τριάκοσι-οστός*, &c.; and similarly in Latin, *cent-ēsimus*, *ducent-ēsimus*, *trecent-ēsimus*, &c. In like manner were also formed the ordinals of the thousands, as *χιλι-οστός*, *δισχιλι-οστός*, &c., cp. also Lat. *mīll-ēsimus*.

3. OTHER NUMERALS.

§ 394. The multiplicative numeral adverbs were formed differently in the different languages. Greek, Latin and Sanskrit have similar words for *twice* and *thrice*, as *δίς*, *τρίς*, Lat. *bis*, *ter* from **tris*, Skr. *dvīḥ*, *trīḥ*, but for the other numerals they had different formations, as *ἄ·παξ* : *πήγνυμι*, Lat. *sem-el*, Skr. *sa-kft* (§ 380); *τετράκις*, Lat. *quater*, Skr. *catūḥ*; *πεντάκις*, Lat. *quīnquiēs*, Skr. *pañcakṛtvah*, &c. From *four times* onwards the Greek numerals were formed from the cardinals by means of the suffix *-κις* in Attic beside *-κι* in various other dialects. *-κις* had its *-s* from *δίς* and *τρίς*, and *-κι-* corresponds to the

Sanskrit adverbial particle *cid* which was originally the neuter of the interrogative pronoun, Indg. **qid*, Lat. *quid* (§ 202, note 1), cp. Hom. πολλά·κι for older *πολλύ·κι = Skr. पूरु *cid*, *many times* (cp. § 202, note 2). From forms like τετρά·κις, ἑπτά·κις, ἐνά·κις, δεκά·κις, τριάκοντά·κις the -ά·κις became extended by analogy to all the other numerals, as πεντάκις, ἔξακις, ὀκτάκις, εἰκοσάκις; ἑκατοντάκις with -ά·κις after the analogy of τριάκοντάκις, τεσσαρακοντάκις, &c.; διακοσιάκις, χιλιάκις.

§ 395. The multiplicative adjectives were formed by adding -πλόσ, -πλοῦς: πλέω to the forms of the cardinal numerals as they appear in the multiplicative adverbs, as ἀ·πλοῦς, δι·πλοῦς, τρι·πλοῦς, τετρα·πλοῦς, πεντα·πλοῦς, &c. And similarly ἀ·πλόσ, δι·πλόσ, the -πλόσ of which corresponds to the -plus in Lat. *sim*-plus, *du*-plus. With -πλόσ is also related the -πλάσιος from *πλατιγός in δι·πλάσιος, τρι·πλάσιος, τετρα·πλάσιος, &c.

δισσός, τρισσός, Att. διττός, τριττός from *διχής, *τριχής were formed from the stems διχή, τριχή in the adverbs δίχα, τρίχα; and similarly Ion. διξός, τριξός, τετραξός, πενταξός, from *διχθής, &c. were formed from the adverbs διχθά, τριχθά, &c. The formation of these adverbs in -χά, -χθά has never been satisfactorily explained.

§ 396. The feminine nouns of number in -άς gen. -άδος with -ά- from -μ-, -η-, which was original in ἑπτάς, ἐννεάς (*εινάς*) and δεκάς. After the analogy of these were then formed, μονάς, ἐνάς, δυάς, τριάς, τετράς, πεντάς (*πεμπάς*), ἔξας, ἔβδομάς, ὀκτάς, δύδοας. It is difficult to account for the -d- suffix in the above forms unless we may suppose that -d- stood beside -t- in prim. Indg., cp. the stem δεκάδ- beside Skr. दाशत्, Lith. deszimt-, O.Slav. deset- (§ 111). It is probable however that the suffix was originally -t-, as it certainly was in εἰκάς, &c. and that the new formation in the inflected forms went out from the nom. singular where t- and d-stems regularly fell together (§ 343). In ικάς,

εἰκάς, *τριάκας* with -ā- after the analogy of *τριάκοντα*, -κάς represents Indg. *.kmt-s and the Sanskrit stem -śát-. *έκατον-τάς* with the second -τ- from the ordinal *έκατοστός*.

For feminine numerals like *τριττύς*, *τετρακτύς*, &c. see § 266.

CHAPTER XI

PRONOUNS

✓ § 397. The most difficult chapter in works on comparative grammar is the one dealing with the pronouns. It is impossible to state with any degree of certainty how many pronouns the parent Indg. language had and what forms they had assumed at the time it became differentiated into the various branches which constitute the Indg. family of languages. The difficulty is rendered still more complicated by the fact that most of the pronouns, especially the personal and demonstrative, must have had accented and unaccented forms existing side by side in the parent language itself; and that one or other of the forms became generalized already in the prehistoric period of the individual branches of the parent language. And then at a later period, but still in prehistoric times, there arose new accented and unaccented forms side by side in the individual branches, as e. g. beside the accented form *mē, *me* there existed in prim. Indg. the unaccented form *me, the former of which became generalized in Latin. In Sanskrit the original accented form mā = Indg. *mē came to be used for the unaccented form and then a new accented form mām was created with -m from ahám, I. In Greek the accented form died out and then to the old unaccented form μὲ a new accented form ἐμέ was created with ē- from ἐγώ; and similarly Skr. tvā = Indg. *twē, *thee* beside tvám; Gr. οὐε from Indg. *twe beside the new accented

form $\sigma\acute{e}$. And in like manner Indg. *tū, *thou* beside *tu, both forms of which were preserved in Greek and Old English, as Hom. τύ-νη, OE. þū, *thou* beside Dor. τύ, Att. σύ, OE. þu, but the former became generalized in Latin and the latter in most of the Greek dialects. The original accented accusatives nōs, vōs became generalized in Latin whereas Sanskrit preserved the old distinctions between the accented (asmān, yuśmān) and the unaccented (nah, vaḥ) forms. The following examples will illustrate the manner in which such double forms come into existence: The prim. Germanic accented form for *I* was *ek beside the unaccented form *ik. The separate Germanic languages generalized one or other of these forms before the beginning of the oldest literary monuments and then new accented beside unaccented forms came into existence again. And similarly during the historic periods of the different languages. Thus, e. g. the OE. for *I* is ic, this became in ME. ich accented form beside i unaccented form, ich then disappeared in standard ME. (but it is still preserved in one of the modern dialects of Somersetshire) and i came to be used as the accented and unaccented form. At a later period it became ī when accented and remained i when unaccented. The former has become NE. I, and the latter has disappeared from the literary language, but it is still preserved in many northern Engl. dialects, as i. In these dialects i is regularly used in interrogative and subordinate sentences; the ME. accented form ī has become ai and is only used in the dialects to express special emphasis, and from it a new unaccented form a has been developed which can only be used in making direct assertions. Thus in one and the same dialect (Windhill, Yorks.) we arrive at three forms: ai, a, i, which are never mixed up syntactically by genuine native dialect speakers. This old distinction between the accented and unaccented forms of the personal pronouns has given

rise in many of the South Midland dialects to an entirely new classification whereby the old subjective form has come to be used for the subject and object when accented, and the old objective form for the subject and object when unaccented, as *she saw she, her saw her, she saw her, her saw she*, which have quite different meanings according as *she* and *her* are accented or unaccented. Something similar to what has happened, and still is happening in the modern dialects, must also have taken place in the prehistoric and historic periods of all the Indg. languages ; hence in the prehistoric forms of the pronouns given in the following paragraphs, it must not be assumed that they were the only ones existing in prim. Indo-Germanic or prim. Greek. They are merely given as the nearest ascertainable forms from which the historic Greek forms were descended.

§ 398. The pronouns are usually divided into personal, reflexive, possessive, demonstrative, interrogative, and indefinite pronouns. There is among the various languages considerable agreement in the formation of the personal pronouns of the first and second persons, and of the simple reflexive, simple demonstrative and interrogative pronouns. But all the other classes or parts of classes of pronouns were formed more or less differently in each branch of the parent Indg. language, so that the words used to express such pronouns do not stand in any etymological relation to each other. Owing to this great multiplicity of forms in the oldest historic period of the individual languages, it is impossible in most classes of the pronouns to reconstruct the prim. Indg. paradigms with any degree of certainty or accuracy.

§ 399. In the parent Indg. language the formation of most of the cases of pronouns which had special forms for the masculine, feminine and neuter differed considerably from that of the nouns, cp. ḍ, Skr. sá, Goth. sa beside λύκος, Skr. vṛkāḥ, Goth. wulfs, *wolf*; τό, Skr. tát, Lat.

is-tud beside *γυγόν*, Skr. *yugám*, Lat. *jugum*, *yoke*; nom. pl. *oī*, *τοί*, Skr. *tē*, Goth. *pái* beside Skr. *vṛkāḥ*, Goth. *wulfōs*. This original distinction was not so well preserved in Greek as in most of the other Indg. languages. In Greek there were few differences between the case-endings of nouns and pronouns because of various analogical formations whereby the pronouns came to have noun-endings and vice versa, cp. *τῶν* (§ 408) : *λύκων* beside Skr. *téśām* : *vṛkāṇām*, but *λύκοι* (§ 325) : *oī*, *τοί* beside Skr. *vṛkāḥ* : *tē*, Hom. *θεάων* (§ 321) : *τάων* beside Skr. *áśvānām*, *of mares* : *tásām*.

§ 400. In the personal pronouns we have not only to take into consideration the distinction between original accented and unaccented forms, but also between the different stems and different words which go to form the paradigms of the first and second persons. Many forms had no real case-endings at all, and the so-called cases were formed from entirely different words which were not etymologically related, as in English *I*, *me*; *we*, *us*; *thou*, *you*, corresponding in meaning to Skr. *ahám*, *máṁ*; *vayám*, *asmán*; *tvám*, nom. *yūyám*, acc. *yuśmán*, but in Greek and Latin the original distinction between *we* and *us* became obliterated, as *ἡμεῖς*, acc. *ἡμέας*, *ἡμᾶς* from the same stem as the nominative, Lat. nom. and acc. *nōs*. The reason why the plural of *I* was formed from an entirely different word is obvious, because it not only includes the speaker but also the person or persons spoken to or of. But why the plural of *thou* should be an entirely different word in all the Indg. languages is not known. The plural endings of these pronouns in Greek and the other languages are not original. So far as the forms for the plural were inflected at all, they were originally inflected as singulars. Such personal pronouns as have real case-endings have them mostly after the analogy of the nouns. This is especially so in Greek. The pronouns of the third person

were originally demonstrative in origin. In the parent language as in Greek, Latin, Sanskrit, &c. the nominative of the personal pronouns was rarely used except to express emphasis, because it was sufficiently indicated by the personal endings of the verb.

§ 401. In many of the Indg. languages certain particles occur, which are attached enclitically to the personal pronouns, and in some forms have become an integral part of the pronoun, as in *éyá-v*, *éyá-vn̄η*, *éyw̄γε*, *éw̄yē* (= Goth. *mik*, OE. *mec*, OHG. *mih*, where the particle became an integral part of the word), Skr. *ahá-m*, *I*, *vay-ám* : OE. *wē*, Goth. *weis*, Indg. **wei*, *we*; Lat. *ego-met*; and similarly in demonstrative pronouns, as *ōðe*, *oútost̄*; Lat. *id-em*, Skr. *id-ám*, beside Lat. *id*; Lat. *hic* for older *hi-ce*; Skr. nom. fem. *a-sá-u*, *that*; and even medially in *oútros* from **so+u+to-s* (§ 411). Many of these particles are of obscure origin and it is therefore impossible to determine in all cases what was their original force or meaning.

i. PERSONAL.

First Person.

§ 402. Singular: It is impossible to determine with certainty what was the original form or forms of the nominative. It probably was **egō* = *éyá*, *éyw̄γε*, *éyá-v* (mostly before vowels, entirely so in Homer), *éyá-vn̄η*, Boeot. *iáv*, *iáv* from *éyá-v* through the intermediate stages **éjáv*, **ijáv*, beside *iáv-εt*, O.Lat. *egō*, beside the unaccented form **ego* = Lat. *ego*, Goth. *ik*, Skr. *ahá-m* from **egho-m* with the same interchange between *g* and *gh* as in *μέγας* beside Skr. *mahán*, *great*. This interchange between media and media aspirata existed in the parent Indg. language under certain unknown conditions (§ 111).

The original form of the accusative was **mē* beside **me*,

the former occurs in Skr. *mā*, *má·m*, Lat. *mē*, and the latter in *éμέ*, *éμέ·γε*, *μὲ*, Goth. *mík* = *éμέ·γε*.

The stem-form *me was probably used for the genitive in the parent language. From *me was formed in each branch of the various languages a new genitive in different ways, cp. *éμοῦ*, Skr. *máma*, Lat. *meī*, *mīs*, Goth. *meina*. In Greek it was mostly formed from *éμέ*, *μὲ* by means of -*σjo*, -*σo* from the simple demonstrative pronoun (§ 408), as Hom. *éμεῖ* from **éμεσjō*, Att. *éμοῦ*, *μοῦ*, Ion. *éμέo*, *éμεῦ*, *μεῦ*, from **éμεσo*, **μεσo*; Dor. Lesb. *éμoῦs*, Dor. *éμeōs*, *éμeῦs*, from *éμe+os* from the genitive of the consonantal stems (§ 302); Hom. Lesb. and Dor. *éμé·θεν* with the same ablative adverbial particle which occurs in *πόθεν* (§ 568).

The dative *éμoī*, *μoī*, Skr. *mē*, Lat. *mī* represents the original unaccented form **moi* which was also used for the genitive. The original accented form seems to occur in Skr. *máhya·m*, Lat. *mihi*. Dor. *émuī* was formed after the analogy of the dative = locative plural *άμuī*; Hom. *éμé·θεν* is the same as in the genitive.

Dual: The nom. and acc. *vō* belongs, like the Skr. unaccented form *nāu*, to the plural stem *nō-* which occurs in Skr. *nah*, Lat. *nōs*, *we*; Hom. *vōī* from **vōfī* with the numeral *fī*, *both, two* (§ 386).

The gen. and dat. *vōv*, Hom. *vōvī* from *vōfīv* with -*v* from the dat. plural.

Plural: The original form of the nominative was **wei*, which occurs in Skr. *vay-ám*, Goth. *wei-s*, *we*. The Greek nominative was formed from the stem of the accusative = Indg. **ŋs-me*, and with -*s* after the analogy of the consonantal stems (§ 311). **ŋs-me-s* regularly became **άσμes* in prim. Greek, and corresponds to Hom. Lesb. *άμues* (§ 214), Dor. Boeot. *άμeis*; Att. Ion. Hom. *ήμeis* with -*eis* after the analogy of the masc. *s*-stems (§ 366). All the forms of the nom. acc. gen. and dat. plural with the *spiritus asper* had it from *ūμeis*, &c.

The original form of the accusative was **ns-me*, probably from older **ns-sme*, where *ns-* (= Goth. *uns*, *us*, *as-*, Skr. *as-*) is the weak grade of *nō-*, which occurs in Skr. *nah*, Lat. *nōs*, *we*, and *-sme* corresponds to the Sanskrit enclitic particle *sma*, *ever*; *indeed*, *certainly*, cp. the Skr. acc. *asmān*, *us*. **ns-me* regularly became **āsmē* in prim. Greek = Hom. Lesb. ἄσμε, Dor. ἄμέ, but Ion. ἡμέας with *-as* from the accusative of the consonantal stems (§ 312), and similarly Att. ἡμᾶς from older *-eas*, the regular contraction of which would have been *-ηs*.

The genitive plural was originally inflected like a singular. In Greek it was formed from the stem of the accusative plural and a pluralized form of the ending of the gen. singular, as Hom. ἡμείων, Hom. and Ion. ἡμέων, Att. ἡμῶν, Dor. ἄμεων, ἄμῶν, Lesb. ἀμμέων.

The original locative ending was probably *-smin* which occurs in the Sanskrit loc. sing. *tásmin* : nom. *sá*, *this* (§ 408). The Greek dative = locative was formed from the prim. Greek stem-form **āsm(ē)*- with the addition of the ending *-iv*, as Aeolic ἄμμιν beside ἄμμι with *-i* from the ending of the dat. plural of consonantal stems (§ 316), Dor. ἄμιν, Att. Ion. ἡμύν beside Att. ἡμῖν with long *-i* after the analogy of the long vowel in the other plural case-endings; Lesb. ἄμμεσιν was formed from the nom. plural + the ending *-iv*.

Second Person.

§ 403. Singular: The original nominative was **tū* beside **tu*, the former occurs in Hom. Dor. τῦ-η, Lac. τού-η (οὐ = ӯ), Boeot. τού-ν (οὐ = ӯ), Lat. *tū*, OE. þū, and the latter in Dor. Lesb. τӯ, Att. Ion. Lesb. σӯ with *σ-* from the accusative, OE. þu.

The original accusative was **tē*, **twē* beside **te*, **twe*. The **tē* corresponds to Lat. *tē*, and **twē* to Skr. *tvā*, *tvā-m*. **te* corresponds to Dor. *ré*, unless the *r-* was from

the nominative, OE. *þe·c*, OHG. *di-h*, and **twe* to Att. Ion. &c. *σέ* from **τfε* (§ 168). Dor. Boeot. *τίν* was the locative in form, cp. *ἐμίν* (§ 402). In Dor. the nom. *τύ* was also used for the accusative.

The original form of the genitive was **tewe*, which occurs in Skr. *táva*, *of thee*. In Greek, Lat. and the Germanic languages it was formed in the same manner as the genitive of the first person, as Hom. *σεῦ* from **τfεσγο*; Att. *σεῦ*, Ion. *σέο, σεῦ*, from **τfεσο*; Dor. *τέο, τεῦ*, from **τεσο*; Dor. Boeot. *τέος, τεῦς* from *τε+os* from the genitive of the consonantal stems (§ 302); Dor. Boeot. *τεοῦς* from *τεο+os* with double genitive ending; Dor. *τεοῦ* with -*εοῦ* from *τεοῦς*; Lesb. *σέθεν* as in *ἐμέθεν*. Lat. *tuī, tis*, Goth. *peina*.

The original form of the locative was **twoi* beside **toi* which was also used for the genitive, the former occurs in the Greek dative *σοί* from **τfoli*, and in the Sanskrit accented form *tvé*, and the latter in Hom. Dor. *τοί* and in the Sanskrit unaccented form *tē*. Dor. *τίν* and Hom. Dor. *τεῦν* were locatives formed like *ἐμίν*.

Dual: The nominative and accusative was in prim. Greek **σFω* from older **τFω*, which was changed to *σφώ* either through the influence of the ending in *δμ-φω* or of the *σφ-* in the reflexive pronominal form *σφί(ν)*; Hom. *σφῶι* was formed like *νῶι*.

The genitive and dative *σφῆν*, Hom. *σφῶiν*, was formed like *νῶν, νῶiν*.

Plural: The original nominative was **jūs* which occurs in Goth. *jūs*, Lith. *jūs*; Skr. **yūś-ám* was changed to *yūyám* after the analogy of *vayám, we*. The Greek nominative was formed from the stem-form of the accusative as in the first person, as Att. Ion. *ὑμεῖς*, Ion. *ὑμεῖς*, Hom. Lesb. *ὕμης*, Dor. Boeot. *ὑμές*.

The original form of the accusative was **us-me* probably from older **us-sme*, where *us-* is the weak grade of **wōs* which occurs in Skr. *vah*, Lat. *vōs*. From prim. Greek

**νσ-με* were formed with the same endings as in the first person, Hom. Lesb. *ὑμε* (§§ 214, 402), Dor. *ὑμέ*, Ion. *ὑμέας*, *ὑμέας*, Att. *ὑμᾶς*.

The genitive was formed in the same manner as in the first person, as Hom. *ὑμείων*, Ion. Dor. *ὑμέων*, Ion. *ὑμέων*, Att. Dor. *ὑμῶν*, Lesb. *ὑμμέων*.

The Greek dative = locative was formed from the prim. Greek stem-form **ὑσμ(ε)*- with the same endings as in the first person, as Aeolic *ὑμμιν* beside *ὑμμι*, Dor. *ὑμίν*, Att. Ion. *ὑμῖν*, Ion. also *ὑμῆν*.

2. REFLEXIVE.

§ 404. The reflexive pronoun originally referred to the chief person of the sentence (generally the subject), irrespectively as to whether the subject was the first, second, or third person singular or plural. This usage was in a great measure preserved in Sanskrit and the Baltic-Slavonic languages, but in Greek, Latin and the Germanic languages the original reflexive pronoun became restricted to the third person, and then the reflexive pronouns for the first and second persons came to be expressed differently in the different languages. The original stem-forms of the reflexive pronoun were **se-* and **sewe-* beside **swe-*. **se-*, the strong grade form, occurs in Lat. *sē*, *si·bi* and in Goth. *si·k*, *himself*, and *s-*, the weak grade form, in $\sigma\phi\iota(v)$ where $\phi\iota(v)$ is the same suffix which often appears in nouns (§ 308). After the analogy of the datives $\sigma\phi\iota\nu$: *fīn* there was formed *σφέ* beside *fē*. At first the forms *σφίν*, *σφέ* were used beside *fīn*, *fē* without any distinction in meaning, but at a later period the $\sigma\phi$ -forms gradually came to be used more and more for the plural only, and then special plural forms for the other cases were made chiefly after the analogy of the personal pronouns of the first and second persons. For examples of **sewe-* beside **swe-* see below.

Singular : The original form of the accusative was *se beside *sewe, *swe, the former occurs in Lat. *sē*, Goth. *si-k*, *himself*, and the latter in Hom. éé from *σεϝ, Att. Hom. Dor. ē, Lesb. *Fé*, from *σεϝ.

The original form of the genitive was *swe which was also used for the accusative. In Greek the two cases became differentiated by the creation of a new form for the genitive just as in the personal pronoun of the first person, as Hom. *ελο* from *σεϝσιο; Att. Dor. *οῦ*, Hom. *έο*, Ion. *εῦ*, from *σεϝσο; Dor. Boeot. *έοῦς*, Dor. *οῦς*, Locr. *Fέος*, from *σεϝ+os from the genitive of the consonantal stems (§ 302); Dor. *έοῦ* after the analogy of *έοῦς*; Lesb. *έθεν*, Hom. Dor. *έθεν* with -θεν as in *έμεθεν* (§ 402).

The Att. Ion. Dor. dative *οῖ* can be from prim. Greek *σφοι or from *σοι, *eius*, *ei*, Lesb. *Fοῖ*, Cypr. *Fοι* from *σφοι; Hom. *έοῖ* from *σεϝοι; Dor. *Fίν*, Boeot. *έτν* from *σεϝιν were old locative forms like *έμιν* (§ 402).

Dual : From σφέ and σφίν were formed the Hom. nom. and acc. σφώé, and gen. and dat. σφών.

Plural : The nom. σφέ̄s, acc. Ion. σφέ̄as, Att. also Hom. σφᾶs, gen. Hom. Dor. Lesb. σφε̄aw, Ion. σφέ̄aw, Att. also Hom. σφῶn, were all formed after the analogy of the personal pronouns of the first and second persons. On the Dor. Lesb. acc. σφέ, and Ion. Dor.-Lesb. dat. σφί(ν), see above; the Att. Ion. dat. σφίσι(ν) was formed after the analogy of the dative of the consonantal stems (§ 316).

§ 405. The singular of the compound reflexive pronouns was formed from the personal pronouns + αὐτόs, which in Homer is always written as two separate words, as ἐμοὶ αὐτῷ, σοὶ αὐτῷ, οἱ αὐτῷ, &c., but in the other dialects as one word, as acc. Att. ἐμαντόν, σεαντόν, σᾶντόν, ἔαντόν, ἀντόν, Ion. ἐμεωντόν, &c.; gen. Att. ἐμαντοῦ, σεαντοῦ, σᾶντοῦ, ἔαντοῦ, ἀντοῦ, Ion. ἐμεωντοῦ, &c.; dat. Att. ἐμαντῷ, σεαντῷ, σᾶντῷ, ἔαντῷ, ἀντῷ, Ion. ἐμεωντῷ, &c. Regular forms were Att. ἐαντῷ, Ion. ἔωντῷ, from ἐοῖ (dat. of the

possessive pronoun) + *aúτῳ*, Att. *αὐτῷ* from *οἶ* + *aúτῳ*, then after the analogy of these the *α* and *ω* were extended to the other cases.

In the plural the two pronouns were inflected separately in the first and second persons and often also in the third, as *ἡμᾶς αὐτούς*, *ὑμᾶς αὐτούς*, *σφᾶς αὐτούς* beside simply *αὐτούς*.

The origin of *αὐτός* is uncertain. Some scholars assume that it is from **ἀσυ-* + the pronominal stem *το-*, where **ἀσυ-* corresponds to Skr. *asu-*, *life, life of the soul*. Others assume that it is composed of the adverb *αὖ*, *again* + *το-s*. The oblique cases of *αὐτός* were used to express the personal pronoun of the third person. The reflexive forms *σφεῖς*, *σφᾶς*, *σφῶν*, *σφίσι* were also used to express the plural of the third person.

3. POSSESSIVE.

§ 406. The possessive pronouns were inflected like ordinary adjectives : *ἐμός*; Att. *σός*, Skr. *tváh*, Indg. **t*wo*s*, *thy*, beside Hom. Dor. Lesb. *τεός*, Boeot. *τιός*, O.Lat. *tovos*, later *tuos*, *tuus*, Indg. **tewos*; Att. Hom. *ὅς*, Cret. *Fós*, Skr. *sváh*, Indg. **swos*, *his*, beside Hom. *έός*, Boeot. *ἐfός*, O.Lat. *sovos*, later *suos*, *suus*, Indg. **sewos*; Hom. *σφός* was formed after the analogy of *ὅς*, *έός*. Att. Ion. *ἡμέ-τερος*, Dor. *ἄμε-τερος*, Lesb. *ἀμμέ-τερος*, Att. Ion. Dor. *ὗμέ-τερος*, *σφέ-τερος*, Hom. *νοῦ-τερος*, *σφωῦ-τερος*, like Lat. *noster*, *vester*, were formed with the comparative suffix *-tero-* (§ 376); Lesb. *ἄμμος*, *ὕμμος*, Dor. *ἄμός*, *ὕμός* were formed direct from the accusative stems of the personal pronouns.

4. DEMONSTRATIVE.

§ 407. In the parent Indg. language the nominative singular masculine and feminine was **so*, **sā* = *ὁ*, Dor. *ἄ*, Att. Ion. *ἥ*, Skr. *sá*, *sā*, Goth. *sa*, *sō*, *this, that, the*. All

the other cases of the singular, dual and plural were formed from the stems *to-*, *te-*, fem. *tā-*. On the Greek case-endings of the inflected forms see § 399.

a. Masculine and Neuter.

§ 408. Singular: The nominative masculine ó corresponds to Skr. sá, Goth. sa, Indg. *so. The accusative masculine *τόν* = Skr. tám, Lat. is-tum, Goth. þan-a, Indg. *tom. The nom. and acc. neuter *τό* = Skr. tát, Lat. is-tud, Goth. þat-a, O.E. þæt, Indg. *tod. The original form of the genitive was *tosjo beside *toso, *teso, the former occurs in Hom. τοῖο from *τοσγό, Skr. tásya, and *toso in Att. Ion. τοῦ, Dor. τῶ, and *teso in Goth. þis, OHG. des. The original form of the dative was *tōi beside *tosmōi, the former occurs in τῷ, Lat. is-tō, and the latter in Skr. tásmāi.

Dual: The original case-endings of the nominative and accusative dual were the same as those of the o-declension of nouns (§ 325). Masc. *tōu = Skr. tāu, beside *tō = τώ, Skr. tā; neut. *toi = Skr. té, Gr. τώ for *τοι was a new formation like ἔνγά (§ 326). On the gen. and dat. τοῖν, τοῖν see § 325.

Plural: The original masculine nominative was *toi = Dor. &c. τοί, Skr. té, Lat. is-tī, Goth. þái; Att. Ion. Cret. Lesb. Thess. Arcad. and Cyprian oi was a new formation after the analogy of ó. The original masculine accusative was *tons = Cret. τόνς, Att. Ion. &c. τούς, Skr. tán, Lat. is-tōs, Goth. þans. Nom. and acc. neut. Indg. *tā = Vedic tā, Lat. is-ta, Goth. þō; Gr. τά was a new formation like ἔνγά (§ 326). The Greek gen. τῶν was formed after the analogy of the o-declension of nouns (§ 399), the original genitive was *toisōm which occurs in Skr. téśam. The original form of the locative was *toisu = Skr. téśu; τοῖσι with -σ- restored as in λύκοισι (§ 325). The Greek dative

tōis corresponds to the original instrumental *tōis = Skr. tāih, Lat. is-tis, Lith. taīs.

b. Feminine.

§ 409. Singular: Nominative Indg. *sā = Dor. ἄ, Att. Ion. ἦ, Skr. sá, Goth. sō. Accusative Indg. *tám = τῆν, Skr. tám, Lat. is-tam, Goth. þō. The Greek gen. and dat. τῆς, τῇ had the endings of the ā-declension of nouns (§ 321), the original forms were gen. *tosjās or *tesjās = Skr. tásyāḥ, beside *tesās = Goth. þizōs; dat. *tosjai or *tesjai = Skr. tásyāi, beside *tesāi = Goth. þizzai.

Dual: Nominative and accusative Indg. **tai* = Skr. *tē*; Gr. *τά* was a new formation like *χώρα* (§ 321); instead of *τά* the masc. *τό* was mostly used, and similarly gen. and dat. *τοῦ* for *ταῦ* (see § 325).

Plural: Nominative Indg. *tās = Skr. tāḥ, Goth. þōs, Lith. tōs; Gr. ταῖ, αὶ were new formations after the analogy of τοῖ, οἱ (cp. § 321). Accusative Indg. *tāns = Cret. τάνς, Att. &c. τάς, Lat. is-tās; Skr. tāḥ, Goth. þōs were the nom. used for the accusative. Genitive Indg. *tāsām (cp. § 314) or -ōm = Hom. τάων, Dor. τᾶν, Att. &c. τῶν, Lat. is-tārum. Locative Indg. *tāsu = Skr. tāsu; on the Gr. dative forms ταῖς, ταῖσι, τῆς, τῆσι see § 321.

§ 410. The origin of the second element of δ-δε, η-δε, τ-δε is unknown. Inflected forms of the second element occur in Hom. *τοῖσ-δεσσι*, *τοῖσ-δεσι* and in the Lesb. gen. pl. *τῶν-δέων*. Traces of similar compounds of the simple demonstrative with particles of unknown origin occur in the Thessalian neut. nom. sing. *τ-νε*, pl. *τά-νε* and with both elements inflected in the gen. sing. *τοῦ-νεος* and gen. pl. *τοῦν-νεον*; in the Arcadian gen. sing. *τω-νί*, acc. fem. *ταν-νί*, neut. pl. *τα-νύ*; and in the Cyprian nom. δ-νν.

§ 411. The prim. Greek forms corresponding to *οὗτος*, *αὕτη*, *τοῦτο* were: *δ-υ-το, *ἀ-υ-το, *τοδ-υ-το; acc. *τον-υ-το, *τāν-υ-το, *τοδ-υ-το; gen. *τοσο-υ-το, *τᾶσ-υ-το, *τοσο-υ-το, &c.,

consisting of the simple demonstrative + the deictic particle *v*, which is also common in Sanskrit pronouns (cp. nom. fem. *asāu* = *a+sá* (= Gr. *ἄ-*) + *u*, *that*, acc. masc. *amúm* = *am+u+m*, *that*), together with the uninflected pronominal stem *το-*. During the prehistoric period of the language the inflexion was then transplanted from the first to the last element of the compound, as acc. *τοῦτον*, *ταύτην*, *τοῦτο*, from **το-υ-τον*, **τᾶ-υ-τᾶν*, **το-υ-τοδ*; gen. *τούτου*, *ταύτης*, from **το-υ-τοο*, **τᾶ-υ-τᾶς*, &c.; and the old nominatives **ούτο*, **αύτο* became *οὗτος*, *αὕτη* after the analogy of the nom. singular of adjectives. The Att. Ion. nom. pl. *οὗτοι*, *αὕται* beside Dor. *τοῦτοι*, *ταῦται* were new formations after the analogy of the nom. singular. The nom. acc. pl. neut. *ταῦτα* had *-av-* from the feminine stem. The masc. forms of the dual were used for all genders; and similarly in Att. Ion. the gen. pl. *τούτων* beside Dor. and Lesb. fem. *ταυτᾶν*.

In the Boeotian dialect the stem-form of the masc. nom. singular became generalized, as acc. *οὗτον*, neut. *οὗτο*, gen. *οὗτω*, nom. pl. *οὗτοι*, neut. *οὗτα*, acc. *οὗτως*, gen. *οὗτων*.

The deictic particles *-i*, *-iv*, originally the feminine nominative and accusative singular of a demonstrative pronoun, were often attached to the above compound demonstratives to express emphasis, as *δότι*, *ἡδί*, *τοδί*, *οὗτοσि* or *-iv*, *αὐτη̄*, *τουτού̄*, *τουτω̄*. This *-i* is the same as in the Sanskrit fem. nom. sing. *iyám* from **i-am*, *this*, and in the Gothic fem. acc. *ija*, *her*, and is related to Hom. *īa*, *īav*, *īñs*, *īñ* (cp. § 380).

§ 412. Att. *ἐκεῖνος*, also poet. *κεῖνος*, Ion. *ἐκεῖνος*, *κεῖνος*, Dor. Lesb. *κῆνος*. *ἐκεῖνος* is composed of *ἐ* = the isolated pronominal particle which occurs in Skr. *asāu*, *that*, and *κεῖνος* from **κε-ένος* where *κε-* corresponds to the Latin particle *ce* in *ce-do*, *huius-ce*, and *ένο-* is an old pronominal stem (§ 416); and similarly Dor. *τῆνος* from **τε-ένος*. On forms like *ἐκεινοσि*, *ἐκεινωνί* see above.

5. RELATIVE.

§ 413. The Indg. stem-forms of the relative pronoun were masculine and neuter *jo-*, feminine *jā-* = *ō-*, *ñ-*, Skr. *ya-*, *yā-*, as sing. nom. *ōs* (Phrygian *los*), *ñ*, *ō*, Skr. *yáḥ*, *yá*, *yát*, Indg. **jos*, **jā*, **iod*; gen. *ōv* from **jōto*, *ñs* (a new formation like *tn̄s*, § 409), Skr. *yásya*, *yásyāḥ*; the Hom. gen. *ōv* (*B* 325, *a* 70) and *ēns* (*II* 208) are incorrect forms; pl. nom. *oī*, *aī* (a new formation like *ai*, § 409), *ā*, Skr. *yé*, *yáḥ*, Vedic *yá*, Indg. **toi*, **jas*, **jā*. The simple demonstrative, especially the *τ*-forms, was often also used for the relative in Homer, Herodotus, Dor. Lesb. Boeot. and Arcadian.

6. INTERROGATIVE AND INDEFINITE.

§ 414. The parent Indg. language had several stems from which the interrogative pronoun was formed, viz. *qo-*, *qe-*, fem. *qā-*; *qi-*, *qu-*, with labialized *q* (§ 202). It is impossible to determine to which cases the various stems originally belonged owing to the levelling which took place in the prehistoric period of the separate languages.

qo- occurs in Skr. *káḥ*, Goth. *luas*, Lith. *kàs*, *who?*, neut. Lat. *quod*, Goth. *lu*, OE. *hwæt*, *what?*, Indg. **qos*, **qod*. In Greek it only occurs in pronominal adjectives and adverbs, as *πότερος*, Skr. *kataráḥ*, Goth. *luþpar*, *which of two?*, *ποῖος*, *πόσος*; *ποῖ*, *πόθεν*, *πότε*, *πώ-ποτε*, *πῶς*, Cret. *ð-πω*.

qe- occurs in the gen. sing. Goth. *luis*, O.Slav. *česo*, Hom. *τέο* (Att. *τοῦ*, Ion. *τεῦ*), from Indg. **qeso*, *whose?* From *τέο* was formed *τέων* and then further *τέῳ* (Att. *τῷ*), *τέοισι*; and similarly to *δτέο* (Att. *δτον*, Ion. *δτεν*) were formed *δτέων* (Att. *δτων*), *δτέῳ* (Att. *δτῷ*), *δτέοισι* (Att. *δτοις*). It also occurs in Dor. *τεῖ* for **τεῖ* and in the conjunction *τε*, Skr. *ca*, Lat. *que*, *and*.

qā- occurs in the fem. nom. Skr. *kā*, Goth. *luō*, *who?*,

acc. Skr. *kām*, Goth. *hwō*, *whom?*, and in Dor. *πᾶ*, Att. *πῆ*.

The stem *qu-* is only found in adverbs, as Dor. *δ-πῦς* (Rhodes), *δ-πνι* (Gortyn), *πῦς* (Syracuse), *whither*; Skr. *kū*, Lith. *kuf*, *where*; Lat. *ali-cu-bi*, *ne-cu-bi*, &c.

It is probable that *qi-* belonged originally only to the masc. and neut. nom. and acc. singular, cp. *τίς*, *τί*, Lat. *quis*, *quid*, Indg. **qis*, **qid*; masc. acc. **τίν*, Lat. *quem* for older **quim*. In Greek the stem *τι-* became generalized for all cases and genders. From **τίν* was formed a new accusative *τίνα* after the analogy of such words as *ένα*, cp. also § 330. The *-ν* in *τίνα* was then levelled out into the other cases, as *τίνος*, *τίνι*; *τίνε*, *τίνοιν*; *τίνες*, *τίνας*, *τίνων*, but *τίσι* : *τίνες* after the analogy of such forms as *φρεσί*, *κυσί* : *φρένες*, *κύνες*. From the stem *τι-* were also formed Lesb. *τίφ*, *τίσιν*; Cret. *δ-τίμι* from **τισμί*, Indg. **qismi* beside the Skr. loc. *kásmin*. Megarian neut. pl. *σά* from **τja* for *τίνα* (Arist. *Ach.* 757, 784); indef. Att. *ἄττα*, Ion. *ἄσσα* for initial **τά*, **σά* (§ 187), which arose from a mistaken division of the words in such combinations as *όποι* *ἄττα*, *σμίκρ* *ἄττα* for *όποιά ττα* (cp. Hom. *όπποιά σσα*, τ 218), *σμικρά ττα*; indef. rel. Att. *ἄττα*, Ion. *ἄσσα*, from **ἄτja*. In like manner is also declined the simple indefinite pronoun which only differs from the interrogative in accent.

§ 415. *δεῖνα* is always accompanied by the def. article whether it remains uninflected for both numbers and all genders and cases or whether it is inflected. It is originally a compound of *δεῖ* + the pronominal stem *-ένο-* which occurs in *έκεῖνος* from **ἐ-κε-ένος* (§ 412), so that the original nominative masc. was **όδεῖνος*, acc. **τονδεῖνον*, &c. For the explanation of *δεῖνα* we have to start out from the neut. plural form *ταδεῖνα* = **τάδε-ένα* which, by a mistaken division of the compound, came to be regarded as being for *τα-δεῖνα*. At a later period *δεῖνα* in the combination

$\tau_{\delta}\nu$ δεῖνα came to be regarded as the accusative of a consonantal stem (cp. τίνα, τίνος, § 414) to which were then formed δεῖνος, δεῖνι, pl. δεῖνες, δεῖνας, δεῖνων.

7. OTHER PRONOUNS.

§ 416. The parent Indg. language had several pronouns besides those dealt with in the preceding paragraphs. Some of these were not preserved in Greek and others were only preserved in scanty fragments, as

e.. The original forms were nom. *es, acc. *em, neut. *ed, gen. *esjo (Skr. asyá, *of this*) beside *eso (OHG. es, Goth. is, *of it*), fem. *esjās (Skr. asyáh), loc. *ei (preserved in ei, ēt-τα, and the Goth. relative particle ei), instr. *ē (preserved in ḷ, ḷ-τοι, ēπει-ή). The stem e.. occurs in words like ē-κεῖνος, ē-κεī, ē-κεīθεν, ē-χθές, &c., cp. Skr. a-sáu, *that*, Lat. e-quidem.

eno., ono., the former of which occurs in ēκεῖνος, κεῖνος, Dor. κῆνος, from *κε-ένος, Dor. τῆνος from *τε-ένος, and ἔνη, and the latter in Lith. anàs, *that*, O.Slav. onú, *that, he*.

The locative of an old fem. stem ā.. is preserved in the Dor. conj. al, if.

i-, Lat. is, Goth. is, *he*; acc. Indg. *im, Cypr. īv, O.Lat. im, Goth. in-a, *him*, Skr. im-ám, *this*. The stem also occurs in Hom. iδέ, *and*, Skr. i-dā, *now, in this moment*, i-há, *here*. With īv, O.Lat. im are also probably related Hom. pív used for all genders but only in the singular, and post-Homeric poet. vív used for the singular and plural all genders. The exact formation of these two pronouns is obscure.

The feminine stem ī- which occurs in the Skr. nom. iyám from *i-ám, *this*, and the particle -i as in oन्तोस-ि, ēकेवोस-ि, &c.; the acc. Indg. *ijām (Goth. ija, *her*) beside *im, *ijm (cp. § 330) occurs in the particle -īv, as oन्तोस-īv. With this pronoun is also related Hom. īa, īav, īṣ, īñ,

to which was formed a masc. *tōs*, dat. *tō* in Hom. and Cretan.

The fem. pronoun **sī* = *it*, O.Ir. OHG. *sī*, Goth. *si*, *she*.

ko-, **ke-**, the latter stem occurs in *ékeînos* from **é-ke-e-vos*, in Lat. *ce-do*, *huius-ce*, and in *é-keî*, *keî-thēv*, *keî-thi*, &c. where *keî* is the old locative.

CHAPTER XII

VERBS

§ 417. The forms constituting the Greek verbal-system are of two kinds : the finite and the infinite forms. The finite forms consist of the indicative, subjunctive, optative, imperative and the so-called injunctive (§ 524). Their special characteristics are the personal endings, the augment, reduplication and the distinction of voice, tense and mood. The infinite forms are the infinitive, participles, and the verbal adjectives. The participles had become a part of the verbal-system in the parent Indg. language, and accordingly had voice- and tense-forms ; whereas the infinitive, which is originally an isolated singular case-form of a nomen actionis, became for the most part associated with the verbal-system in the prehistoric period of the separate languages (§ 545). On the verbal adjectives see §§ 555-6.

Primitive Greek inherited almost the entire verbal-system of the parent Indg. language, to which it added considerably by the creation of numerous new formations, so that in course of time its verbal-system became more extensive than that of any other Indg. language. Such new formations were the passive aorist in *-θην*, the future passive in *-θησομαι*, the passive participle in *-θεις*, the so-called future perfect, the pluperfect, the future optative, the optative of the s-aorist, &c.

In the following paragraphs most of the remarks con-

cerning the finite forms of the verb properly belong to the province of syntax. And only such points are mentioned here as are necessary for understanding the finite forms. For the full treatment of the subject the student should consult Brugmann's *Griech. Grammatik*, third ed., pp. 458–568.

§ 418. **Number:** The Indg. finite forms of the verb had like nouns the three numbers—singular, dual and plural—which were preserved in the oldest period of Greek as also in the Aryan, Gothic and Baltic-Slavonic languages, but the dual had practically disappeared in the prehistoric period of the other languages. And even in prim. Greek the first person of the dual was supplanted by the plural. The second and third persons of the dual remained longer in Attic than in the other dialects, but even in this dialect they had become obsolete in the vernacular from about the beginning of the fourth century B.C.

§ 419. **Voices:** The parent Indg. language had two voices—the active and the middle. The former was preserved in the historic period of all the separate languages, and the latter was preserved in Greek, Aryan and Latin and partly also in Gothic. It had no special forms which were exclusively used to express the passive, but before the parent language had become differentiated into the separate languages the middle forms had to some extent begun to be used to express the passive. This mode of expressing the passive underwent further development in Greek, Sanskrit and Latin. And such middle forms as were preserved in Gothic became exclusively passive in meaning. The Greek second aorist passive in *-ην* was originally active in form (§ 458), and the first aorist passive in *-θην* was a special Greek new formation (§ 514).

§ 420. The middle denoted that the action of the verb was directed towards the agent. The use in which the agent was the direct object was rare, as in *λούομαι* (*λοῦματι*),

I wash myself. The original difference in meaning between the middle and active was probably very slight, and this would account for the fact that many verbs with only middle forms have purely an active meaning without any idea of the reflexive meaning, cp. ἡσταῖ, Skr. ástē, *he sits*; Skr. sácatē, *he follows*, Gr. ἔπομαι, Lat. sequor; μητίομαι, Lat. mētior; κεῖται, Skr. śéttē, *he lies down*; and similarly ἄγαμαι, ἀξομαι, ἀλλομαι, βούλομαι, ἐρέυνομαι, κρέμαμαι, μέμφομαι, οἰχομαι, πλάξομαι, σέβομαι, σκέπτομαι, τέρσομαι, φέβομαι, &c. To such middle forms were often created active forms in the historic period of the language, as ἄξω, σέβω: ἀξομαι, σέβομαι. These new formations were based on the analogy of verbs which originally had active and middle forms side by side.

§ 421. Already in the parent Indg. language middle verbs sometimes had an active perfect, and some such verbs were also preserved in Greek, Sanskrit and Latin, as -βέβονλα : βούλομαι, γέγονα : γίγνομαι, δέδορκα, Skr. dadárśa : देप-कोमा, मैमना : मालिनोमाई, ओळाला : ओळ्लुमाई; Skr. papāda : पाद्यते, he falls, vavárta : वार्तते, he turns; Lat. revertī : revertor, assensi : assentior.

§ 422. Many verbs, which are otherwise active in form, have a future middle with active meaning. This is especially the case with such verbs as have a second aorist in use, as *τεύξομαι* : *ἔτυχον*, *πείσομαι* : *ἔπαθον*, *λήψομαι* : *ἔλαβον*, and similarly *ἀμαρτήσομαι*, *βήσομαι*, *γνάσομαι*, *δραμοῦμαι*, *θανοῦμαι*, *θίξομαι*, *καμοῦμαι*, *ληξοῦμαι*, *φεύξομαι*, &c. This phenomenon is peculiar to Greek and is connected with the intransitive use of the second aorist. To aorists like *ἔστην*, *ἔφυν* were formed the future *στήσομαι*, *φύσομαι*, because *στήσω*, *φύσω* were transitive; *βήσω* became transitive after the analogy of *στήσω*, and then to *ἔβην* was formed the future *βήσομαι*. This mode of forming a middle future then became extended to other verbs.

§ 423. Mode or manner of action: It is important to note that tenses in the sense in which we generally use that word were of comparatively late development in the Indg. languages. The verbal forms—whether presential or preterite—had originally in themselves no inherent characteristic to indicate whether an action referred to the present, past or future. If we compare together the augmented tenses we see that they originally expressed something other than what we generally understand by the word tense. In the imperfect, aorist and pluperfect the verbal form itself merely denoted the mode or manner of the action according as it was durative or only momentary, as in English *seek* beside *find*, and it was merely the augment which denoted the past time, but the fact that the augment does not appear in the Latin, Old Germanic and Baltic-Slavonic languages shows that even the augment was not originally necessary to express past time. When the time of the action was sufficiently indicated by the context the augment was not used in the parent Indg. language, see § 430.

§ 424. In the following classification of the mode or manner in which the action takes place (*actio verbi*, or *Aktionsart* as it is generally called in German), it is as a rule only necessary to grasp clearly the difference between the momentary and the durative action. The mode or manner in which an action takes place can be conveniently divided into five types:—

(1) An action is said to be momentary, perfective or aoristic when it is practically completed at the moment it begins, as in English *find*, *strike*. Since this mode of action has no duration it was seldom used to express the present, therefore unaugmented momentary formations generally have a future meaning, as *ἔλμι*, *νέομαι*. A verb became perfective by the addition of a preposition, cp. *ἀποθνήσκει* beside *θνήσκει*; Lat. **consequor** beside **sequor**;

this distinction in form and meaning was most fully developed in the Slavonic languages and became one of the most distinctive features of the verbal-system. The aorist is characteristic of this type.

(2) An action is said to be cursive, durative or imperfective when it denotes continuous action without any reference to its beginning or end, as in English *I am striking* as compared with *I strike*; *ἔσθιω, πίνω* beside *ἔδομαι, πίομαι*. The primary verbs in -*jo-* (§ 477) mostly had durative action, as in *χαίρω*, &c.

(3) The perfect action, that is the mode of action expressed by the perfect stem, denotes a state of the subject which has resulted from a previous action, as in *οἴδα, τέθνηκε* as compared with *γιγνώσκω, θνήσκει*.

(4) An action is said to be iterative when it consists of repeated acts. Here belong especially the reduplicated presents, as *βίβημι, βιβάω* as compared with *ἔβην*. This meaning easily develops into the intensive, and in all languages the desire for emphasis in time reduces the intensive to the value of the simple verb, as in *μίμνω, ἴσχω* beside *μένω, ἔχω*. To this type also belong the verbs in -*éjo-*, as in *φορέω* (§ 497).

(5) An action is said to be terminative when it indicates the beginning or the end of the action, as in English *aim, start, throw* beside *hit*. To this class originally belonged the nasal-presents (§§ 460-7) like *ἄγνῦμι, ὅρνῦμι, δάμνημι*; and also the presents in -*σκω* (§ 469), as *βάσκω*, which however often became iterative.

§ 425. No one Greek verb has or could have all the forms which are associated with the full verbal-system. A present could not be formed from a base or stem which expressed momentary or aoristic action unless the base or stem was modified by a formative element; and on the other hand no base or stem expressing cursive action could occur in the second aorist. Hence arose the series

of defective verbs with presents but no aorists or with aorists but no presents, as φέρω : ἤνεγκον, cp. Lat. *fero* : *tuli*, ἔδω, ἐσθίω : ἔφαγον, ἔρχομαι : ἤλυθον, λέγω : εἶπον, δράω : εῖδον.

§ 426. Tense-formation: In the parent Indg. language there were strictly speaking only two tense-formations, viz. the present-aorist-system and the perfect. The present-aorist-system contained a present and an aorist form which arose from the same base or stem through a difference in accent. The forms mostly used as presents with cursive meaning had the accent in the singular of the active on the first syllable of the base which had the strong grade of ablaut, and in all other forms the accent was on the personal ending and the base had the weak grade of ablaut. The forms with momentary or aoristic meaning had the accent on the second syllable of the base in all forms and it therefore had the strong grade of ablaut. This is called the second or strong aorist. The reason why this difference of meaning should be associated with the difference in accent is uncertain, see Brugmann, *Kurze vergleichende Grammatik*, pp. 507–8. In Greek the tense-system was most completely carried out in the denominative verbs, because such verbs originally possessed no particular mode or manner of action.

The present in the narrower sense had no special characteristic to denote time unless we may regard the primary personal endings as such.

The imperfect belongs to the present stem. The difference between this tense and the second aorist was often one of syntax rather than of form, because forms of the same nature were used partly as imperfects and partly as aorists, cp. forms like ἔφην, ἔγραφον, ἔγλυφον beside the similarly formed aorists, ἔστην, ἔγραφον, ἔφυγον.

There were originally no special forms which were exclusively used to express the future. But forms with

momentary meaning could be used for the future, as *εἰμι*, *νέομαι*. The ordinary future in Greek was originally the subjunctive of the s-aorist (§ 499). The future passive and future perfect were special Greek new formations (§ 501).

The second aorist and the s-aorist had come to have the same meaning already in the parent Indg. language (§ 502). The passive aorist in *-θην* was a special Greek new formation (§ 514).

So far as syntax is concerned the perfect was originally a special kind of present which denoted a state of the subject resulting from a previous action. For the special characteristics of the perfect see § 515.

The Greek pluperfect is simply a preterite form developed from the perfect stem. See § 523.

§ 427. Moods: The parent Indg. language had four moods—the indicative, subjunctive (§§ 525–9), optative (§§ 530–8), and imperative (§§ 539–44)—all of which were preserved in Greek and Vedic. The so-called injunctive is strictly speaking not a mood, because it merely consists of unaugmented indicative forms with secondary personal endings (§ 524). Greek and Vedic are the only languages which preserved the original distinction between the subjunctive and optative in form and meaning. But even in Vedic the distinction began to disappear and with the development of the sjo-future (§ 498) the subjunctive disappeared entirely in classical Sanskrit, and the optative came to be used for both. It was also supplanted by the optative in the prehistoric period of the Germanic and Baltic-Slavonic languages. And although subjunctive and optative forms were preserved in Latin, they became confused in usage already in the prehistoric period of the language. Some scholars doubt whether the parent Indg. language possessed a subjunctive with the function and meaning that we usually associate with it. They are

inclined to regard it as being originally an indicative with momentary meaning which was used to express the future action. In this manner they account for the fact that what we call the subjunctive in Greek partly corresponds in form to the future in Latin, as $\xi\omega$ from * $\xi\sigma\omega$, $\phi\acute{e}r\eta\tau\epsilon$ = Lat. *ero, ferētis.*

§ 428. It is not always easy to draw a hard and fast line between indicative and subjunctive forms. In Greek we have the original subjunctive of the s-aorist used as the future; in Homer forms like $\acute{a}\lambda\gamma\eta\sigma\epsilon\tau\epsilon$, $\acute{a}\mu\epsilon\acute{\iota}\psi\epsilon\tau\alpha\iota$, &c. (§ 526) are sometimes futures and sometimes aorist subjunctives; the subjunctive of the athematic verbs corresponds in form to the indicative of the thematic, cp. Hom. $\zeta\mu\epsilon\nu$ beside $\phi\acute{e}r\omega\mu\epsilon\nu$.

Possibly the optative (§§ 530-8) was originally merely a characterized present denoting *wish*. The s-aorist of the optative was a special Greek new formation.

Already in the parent Indg. language the imperative system was made up of several distinct formations which included (a) injunctive forms, (b) forms with the bare stem, and (c) compound forms. See §§ 539-44.

REDUPLICATION.

§ 429. Reduplication had become a part of the verbal-system already in the parent Indg. language, and was originally used to express iterative or intensive action. At a later period it also came to be used as a tense-forming element. It was preserved in Greek, Aryan, Latin, Gothic and Old Irish. There were originally three types of reduplication, type (a) with ī in the reduplicated syllable, type (b) with ē in the reduplicated syllable, and type (c) with the whole syllable reduplicated. The tenses which had reduplication were the present, aorist and perfect.

The reduplicated presents originally had ī beside e, but the exact relation in which ī stood to e is unknown. The

i became generalized in the Greek presents except perhaps in one or two isolated forms like Hom. κέ-κλυ-θι, pl. κέ-κλυ-τε, whereas both types were preserved side by side in Sanskrit, as γίγνομαι : Lat. *gigno*, μίμνω, δίδασκω, ἵζω from *σισδω, ὥσχω from *σισχω, πίμπλημι (Skr. pí-parmi, *I fill*), πίμπρημι, both verbs with -μ- after the analogy of πιμπλάνω (§ 466); ὥστημι from *σιστᾶμι : Lat. *sistit*, Skr. tí-śthati, *he stands*; but τίθημι from *θιθημι beside Skr. dá-dhāmi, δίδωμι beside Skr. dá-dāmi.

The aorist had *e* which was regularly preserved in Greek, as ἔ-πε-φνον, inf. πε-φνέμεν, ἔ-σπομην from *σε-σπομᾶν, and similarly κεκλόμην, κεχαρόμην, λελαθέσθαι, λελαβέσθαι, πέφραδον : φράξω, πέπιθον, τετυκεῦ, &c.

The perfect generally had *e*, as δέδορκα, γέγονα = Skr. dadárśa, jajána, for other examples see §§ 518–22. Beside *e* there also existed ē which is rare in Greek (cp. Hom. δη-δέχαται : δέχομαι) but common in Vedic as vā-várta beside va-várta, *he has turned*, see Whitney, *Sanskrit Grammar*, § 786. On the consonants in the reduplicated syllable of the perfect see § 517.

Type (c), which consisted of the reduplication of the whole syllable, was the oldest mode of reduplication. Here it is necessary to make two sub-divisions according as the base or stem began with a consonant or a vowel. (1) When it began with a consonant the reduplication was not a tense-forming element but belonged to the whole verb, as γαργαίρω, μαρμαίρω, πορφύρω, παμφαίνω, cp. also Lat. murmurāre, tintinnāre. In a small number of verbs the formation of the reduplicated syllable is not clear, (a) with *i* in the reduplicated syllable, as δαιδάλλω, παιπάλλω (Hesych.), μαιμάω, παιφάσσω, ποιπνύω, ποιφύσσω, (b) with a nasal or liquid, as γογγύλλω, γαγγαλίζω beside γαργαλίζω; ἐγρή-γορα. (2) When it began with a vowel, as ἀρ-αρίσκω; ἀκ-ήκοα, ἀλ-ήλεμαι, ἀρ-ἄρα, ἀλ-ώλα, ὁμ-ώμοκα, ὕρ-ώρα; ἦγ-αγον, ἦν-εγκον, Ἠρ-αρον, ὕρ-օրօν; ἀγ-αγεῖν,

ἀλ-αλκεῖν, ὁρ-αρεῖν, ἐν-εγκεῖν, ὄρ-ορεῖν, &c.; ἐρῦκ-ακον : ἐρῦκω, ἡνίπ-απον : ἐνίπτω. See § 233.

The reduplicated aorist was common in the language of the epic, but in the later language only a few examples were preserved, as ἥγαγον, ἥνεγκον.

THE AUGMENT.

§ 430. The augment (Indg. e. = ē-, Skr. a-, Arm. e-) was originally a temporal adverb denoting the past, and gradually became used in the so-called imperfect, aorist and pluperfect indicative to express the past tense, because the verbal forms as such possessed no inherent characteristic which indicated the past tense. When it stood in the parent Indg. language before consonants it is called the syllabic augment, as in Indg. *ébhērom = ἔφερον, Skr. ábharam; and when it underwent contraction with a following vowel it is called the temporal augment, as in Indg. *ésm from *é-esm = Hom. ἦα, Skr. ásam. The augment had become an integral part of the verbal system already in prim. Indo-Germanic and always had the principal accent of the compound form, as in *ébhērom beside *bhērom. It was preserved in Greek, Aryan and Armenian, but in the other Indg. languages it either disappeared altogether or was only preserved in isolated forms. When the time of the action was sufficiently indicated by the context the augment was not used in the parent language, so that forms like *ébhērom and *bhērom existed side by side without any distinction in meaning. After the analogy of the augmented forms the unaugmented forms also acquired in the course of time a preterite meaning independently of the context. This accounts for the optional use of the augment in Vedic, Homer and in later Greek poetry. The augmented forms became generalized in Sanskrit. They had also become general in the oldest

period of Greek prose except in the pluperfect where both forms existed side by side, as in ἐπεπόνθη, ἐπεπόνθειν beside πεπόνθη, πεπόνθειν, and in the Ionic iterative forms in -σκον which never have the augment, as φεύγεσκον, φύγεσκον, λάβεσκον. ἔχρῆν was a new formation beside the regular form χρῆν which was a contraction of χρὴ ἦν.

In verbs compounded with a preposition the augment stood between the component parts, as in ἀπ-έ-βαλον, περι-έ-βαλλον, παρ-έ-σχον, cp. Skr. imperf. ud-á-patat beside the pres. ut-pátati, *he flies up*. In a few cases the compound verb came to be regarded as a simplex and then had the augment in front of the preposition, as ἐκάθιξον, ἐκάθευδον beside καθῆνον, epic καθεῦδον with temporal augment; or with both elements augmented, as ἡν-ειχόμην, ἡν-εσχόμην, ἡμφ-εσβήτουν.

Verbs compounded with the inseparable particle δυσ- have the augment in front of it, as ἐδυστύχοντο; the same rule also applies to verbs derived from compound nouns, as ἐμύθολόγησα, but if the first element was a preposition the augment was sometimes placed after it on analogy with verbs of the type ἀπ-έ-βαλον, as ἀπ-ε-λογησάμην.

The syllabic augment also occurred originally in verbs which began with s- and j-, but these sounds disappeared in prim. Greek and the loss of them gave rise to various contractions and analogical formations. é-é- regularly underwent contraction (Att. ει-, Dor. η-) after the loss of σ- and ι- in the combinations é-σε-, é-je-, as Att. είχον, Dor. ḥχον from *έσεχον; είρπον, Dor. ḥρπον from *έσερπον, cp. Lat. serpo; είπόμην from *έσεπομην, cp. Lat. sequor (§ 219); ειστήκειν from *έσετηκειν; είμεν from *έγεμεν. In all other combinations we have the temporal augment after the analogy of verbs which originally began with a vowel, as ἵζον for *είζον from *έσιξον : ἵω, and similarly ὑγίανα : ὕγιανω, ὄρμησα : ὄρμάω, ḥνυτο : ḥνῦμι, &c. On the double consonants in the original initial combination s +

nasal or liquid, see the phonology, as in Hom. ἔλλαβε, ἔρρεον (§ 215), ἔμμαθεν, ἔννεον (§ 214).

Verbs, which originally began with **w.** = **f-** have the syllabic augment in Homer, but contraction in Attic where possible, as Hom. ἔιδον, Att. εῖδον, Lesb. εῦδον from *ἔfiδon; Hom. ἔειπον, Att. εἶπον; Att. εἰργαζόμην, εἴκαζον beside ἡργαζόμην, ἥκαζον with temporal augment; Hom. ἔσσατο, ἔάνδανε, &c., Att. ἔωνούμην, ἔώθουν beside ὄθουν with temporal augment. Forms like Att. φκησα, ὠργίσθην, ὠρθωσα, &c., Hom. ὄφελλον were new formations with the temporal augment. ἔρριπτον from ἔfριπτον : φίπτω, and similarly ἔρρηξα.

Beside **e-** there seems also to have been a form **ē-** (= Skr. ā-) in prim. Indo-Germanic, which occurred before verbs beginning with **w-**, **j-** or **r-**, as in Hom. ḡ-εīδη, Att. ḡδειν, Hom. ḡp-η-ύpa from *ἀp-η-fρa, cp. Skr. impf. ā-vṛṇakः pres. vṛṇākti, he turns round. Some scholars assume that such an ḡ- occurs in ḡβουλόμην : βούλομαι, ḡμελλον : μέλλω, ḡδυνάμην : δύναμαι, but it is more probable that these were new formations after the analogy of ḡθελον : ἔθέλω beside θέλω.

It is difficult to account satisfactorily for forms like ἔάλων : ἀλίσκομαι, ἔώρων, ἔώρων : ὄράω, with the rough breathing from the present, ἔάγην : ἄγνūμi, ἄν-έφξa : o᷍γνūμi. They contain either both the syllabic and the temporal augment or else they had originally the syllabic augment **η-** and then underwent quantitative metathesis whereby ḡa-, ḡo- became ēā-, ēō- (§ 72).

§ 431. The augment became contracted in prim. Indo-Germanic with verbal forms beginning with **e-**, as Indg. *ésm from *é-esm = Hom. ḡa, Skr. ásam, I was; Indg. éjm from *é-ejm = ḡa for * ḡa (§ 458), Skr. áyam, I went. It is probable that e-o- (ώζον : ὅζω) and e-a- (ἥγον, Dor. ἄγον : ἄγω, cp. Skr. impf. ájam : pres. ájāmi, I drive, Lat. ēgi : ago) also became contracted in the parent Indg. language.

After the analogy of these and similar forms there arose in prim. Greek the system of simply lengthening the vowel in the augmented tenses of verbs beginning with a vowel, as ἥθελον : ἔθέλω, ἥλπιζον : ἐλπίζω, ἥμπεδονν : ἐμπεδώ; ἵανον: ἵάνω, ἵκέτευον : ἵκετεύω; ὑφῆνα : ὑφάνω, ὑγίανον : ὑγιάνω; ὕδαξον : ὕδάξω, ὕμίλονν : ὕμιλέω.

The long diphthong, which occurred in the augmented tenses of verbs beginning with a diphthong, was regularly shortened in prim. Greek (§ 63), as in Ion. αἵτεε, αὔξετο, εὔχετο. Later new formations were forms like ἥτεον, ἥτουν : αἵτέω, ηῦξον : αὐξάνω, ηύχόμην : εὔχομαι, φέδησα : οἰδέω.

THE PERSONAL ENDINGS.

§ 432. The parent Indg. language had two kinds of personal endings—primary and secondary—, the former occurred in the present indicative active and middle, the so-called s- or sjo- future, and the indicative perfect middle, and the latter in all the augmented tenses of the indicative active and middle, the so-called injunctive forms of the imperative, and the optative. The subjunctive had originally partly primary and partly secondary endings. In Greek it has the same endings as in the present indicative. The indicative perfect active had its own special endings for the three persons of the singular. On the endings of the imperative see §§ 539–44.

The original system and distribution of the personal endings were better preserved in Sanskrit than in any of the other Indg. languages. The original distinction between the primary and secondary endings was only preserved in Greek in the first and second persons of the singular and in the third person of all numbers. Only scanty fragments of the athematic conjugation were preserved in Latin and the Germanic languages, and even in Greek many verbs passed over into the thematic conjugation.

tion, which remained athematic in Sanskrit. In Sanskrit the ending *-mi* of the athematic conjugation was extended by analogy to the thematic.

Of the origin of the personal endings nothing is known with any degree of certainty or even probability notwithstanding all that has been written upon the subject. It is sometimes assumed that they were partly or entirely of pronominal origin, but this is a theory which can neither be proved nor disproved. It is also unknown which of the two kinds of endings is the older or in what etymological relation they originally stood to each other. And in like manner the formal relation between the active and middle primary and secondary endings is equally obscure.

I. THE ENDINGS OF THE ACTIVE.

Singular.

§ 433. The primary endings of the first person were *-mi* in the athematic and *-ō* in the thematic verbs, as Lesb. ἔμμι, Att. Ion. εἰμί, Skr. ásmi, Goth. im, Lith. esmì, O.Slav. jesmī, *I am*; δίδωμι, τίθημι = Skr. dādāmi, dādhāmi; ἵστημι, δείκνυμι, δάμνημι. φέρω, Lat. fero, Goth. baíra, but Skr. bhárā-*mi* with *-mi* from the athematic verbs; fut. λείψω, λέσω, θήσω, δώσω, στήσω, δείξω; subj. ἔω, ὁ from *esō = Lat. ero (fut.), λείπω, τιθῶ, διδῶ, δεικνύω.

NOTE.—In Boeot. Lesb. Thess. Arcad. and Cyprian the denominative verbs in *-άω*, *-έω*, *-όω* often had the ending *-μι* after the analogy of the athematic verbs; and similarly in Homer in the subjunctive, as ἔθέλωμι, ἀγάγωμι, εἴπωμι, &c.

The original secondary ending was *-m* or *-m̄* according as the preceding sound was a vowel or a consonant, as ἔφερον (§ 141) = Skr. ábharam, cp. Lat. amābam; ἔτιθην, ἔστην = Skr. ádadhām, ásthām, ēdūn; εἴην from *έσγην = Skr. syām, Lat. siem, sim; τιθείην, διδοίην, θείην, δοίην. ḡ, Hom. ḡα from Indg. *ésm̄ = Skr. ásam for *ása with

.m from forms like *ábharam*; ἔπεψα = Skr. *ápākṣam*, ἔλυσα; opt. of the thematic verbs, as Skr. *bhárēya*-m, but Gr. φέροιμι for *φερογα or *φέροιγα; after the analogy of τίθημι : τίθης so to φέροις was formed φέροιμι, and similarly δεικνύοιμι, &c.

§ 434. The primary ending of the second person was -si which was only preserved in Homer and Syracusan ἔσ-σι, Indg. *es-si, beside εἰ, Skr. ási, Indg. *esi; εἰ from *ει-σι = Skr. é-ši, Lith. ei-si. In Greek the other athematic verbs had the secondary ending, cp. τίθης, δίδως beside Skr. dádhāsi, dádāsi. The regular form of the thematic verbs would have been *φέρει from *φέρεσι = Skr. bhárasi, Indg. *bhéresi; *φέρει became φέρεις with secondary ending after the analogy of ἔφερες; and similarly Hom. εῖς for εἰ after the analogy of forms like τίθης; the regular form of the subjunctive would have been *φέρῃ from *φέρησι = Skr. bhárāsi, Indg. *bhérēsi; φέρης was a new formation like φέρεις; and similarly τιθῆς, δεικνύῆς, &c.

The secondary ending was -s, as ἔφερες, ἔστης, φέροις (Goth. baíráis), εῖης (Lat. siēs, sis) = Skr. ábharaḥ, ásthāḥ, bhárēḥ, syāḥ.

§ 435. The primary ending of the third person was -ti which was preserved in all the dialects in ἔσ-τι = Skr. ásti, Lat. est, Goth. ist, Lith. ēs-ti; it remained in the athematic verbs in Dor. Boeot. and the North-West Greek dialects, but became -σι (§ 169) in Att. Ion. and Lesbian, as Dor. τίθητι, δίδωτι, Att. τίθησι, δίδωσι = Skr. dádhāti, dádāti. The regular form of the thematic verbs would have been Dor. *φέρετι, Att. *φέρεσι = Skr. bhárati, but all the dialects have φέρει which was formed after the analogy of φέρεις. The regular form of the subjunctive would have been Dor. &c. *φέρητι, Att. &c. *φέρησι = Skr. bhárāti, Indg. *bhérēti; Att. &c. φέρῃ was formed after the analogy of φέρει; and similarly Hom. φέρησι, ἀγάγησι, ἐθέλησι, &c., with -σι from τίθησι, &c.; ιστή, τιθῆ, στῆ, θῆ, &c.

- The secondary ending was **-t** which regularly disappeared in prim. Greek (§ 230), as ἔφερε, ἔστη, φέροι, εἴη (Lat. *sit*) = Skr. ábharat, ásthāt, bhárēt, syát; Dor. &c. **ñs** from *ñsτ = Indg. *ést, *he was*.

Dual.

§ 436. The first person of the dual was preserved in Sanskrit, Gothic and the Baltic-Slavonic languages, but it disappeared in the prehistoric period of Greek, and its place was taken by the first person plural.

The original primary ending of the second person was **-t(h)es** (= Lat. *-tis* which became used for the plural) or **-t(h)os**, Skr. **-thaḥ** can be from either form, beside the secondary ending **-tom** = *-τον*, Skr. **-tam**. The original distinction was preserved in Sanskrit, but in Greek the secondary ending came to be used for both kinds, cp. ἔσ-τόν, τίθετον, φέρετον beside Skr. **s-tháḥ**, dhat-tháḥ, bhára-tháḥ, and **ñs-τον**, **étiθετον**, **éphéreton** beside Skr. **ás-tam**, **ádhat-tam**, **ábhara-tam**.

The original primary ending of the third person was **-tes** = Skr. **-taḥ**, beside the secondary ending **-tām** = *-τᾶν*, **-την**, Skr. **-tām**. In Greek the **-τον** of the second person came to be used for the primary ending, as **éσ-τόν**, **τίθετον**, **φέρετον**, but Skr. **s-táḥ**, **dhat-táḥ**, **bhára-táḥ**, beside **ñs-την**, **étiθéτην**, **éphéretétn**, **φεροίτην** = Skr. **ás-tām**, **ádhat-tām**, **ábhara-tām**, **bhárē-tām**. Owing to the fact that **-τον** was used both as primary and secondary ending in the second person it also became used occasionally for the secondary ending of the third person, and conversely **-τᾶν**, **-την** instead of **-τον** also became used occasionally in the augmented tenses of the second person.

Plural.

§ 437. The original primary ending of the first person was **-mes** beside **-mos**, the former corresponding to Dor.

-μες and the latter to Lat. *-mus*, Skr. *-māḥ* can be either form. The secondary ending was probably *-men* beside *-mṇ*, the former corresponding to Att. &c. *-μεν* and the latter to Skr. *-ma*. Sanskrit preserved the original distinction between the primary and secondary endings, but in Greek *-μες* became generalized in Doric and the dialect of Delphi and *-μεν* in the other dialects, as Dor. φέρομες, Att. &c. φέρομεν, Dor. εἰ-μέσ, Att. ἐσ-μέν (Hom. εἰ-μέν), τίθεμεν, but Skr. bhárā-máḥ, s-máḥ, dadh-máḥ; Att. &c. ἐφέρομεν, ἐτίθεμεν = Skr. ábharā-ma, ádadh-ma.

§ 438. The original primary ending of the second person was probably *-the* = Skr. *-tha* beside the secondary ending *-te* = Skr. *-ta*. This distinction was not preserved in the other branches of the Indg. languages. In all these languages *-te* was used for both kinds of endings, as ἐσ-τέ (O.Slav. *jes-te*), τίθετε, φέρετε (O.Slav. *berete*), but Skr. s-thá, dhat-thá, bhára-tha, beside ḷ-τε (*ἡσ-τε*), ἐτίθετε, ἐφέρετε, φέροιτε = Skr. ás-ta, ádhat-ta, ábhara-ta, bhárē-ta.

§ 439. The original primary endings of the third person were: *-énti*, *-nti*, *-nti* beside the corresponding secondary endings *-ént*, *-nt*, *-nt*.

The accented form *-énti* only occurred after consonants in the present indicative of the non-reduplicated athematic verbs. It regularly became *-ánti* in Sanskrit, as s-ánti = Dor. ἐν्ति, Att. εἰσί (both forms with the smooth for the rough breathing after the analogy of the singular), Goth. sind, Indg. *s-énti, *they are*; Skr. sunv-ánti : sunó-mi, *I press out*; kriṇ-ánti : kriṇá-mi, *I buy*, corresponding to prim. Gr. *δεικνύ-εντι : δείκνυ-μι, *δαμν-εντι : δάμνη-μι. The only regular form preserved in Greek was Dor. ἐν्ति, Att. εἰσί. In all other verbs belonging to this type *-énti* was supplanted either by the postvocalic form *-nti* of the thematic verbs like Dor. φέρο-ντι, Att. φέρουσι or by the analogical formation *-antι* (see below), and then the third

person came to be formed from the stem-form of the dual and of the other persons of the plural + *-ντι* or *-αντι*, as Dor. φα-ντῖ, Att. φᾶσι, Ion. δεικνῦσι from *δεικνυ-ντι but with the circumflex accent after the analogy of *ἰστᾶσι*, δαμνᾶσι from *δαμνα-ᾶσι older -αντι, δεικνύ-ᾶσι, ἕλσι from *ἴ-αντι beside Skr. य-ांति from Indg. *j-énti (§ 453).

The regular prim. Greek primary ending of the present of the reduplicated athematic verbs was *-ατι* = Indg. *-ṇti*, as in *ἰστ-ατι, *τίθ-ατι = Skr. dádh-ati, *δίδ-ατι = Skr. dád-ati. This ending was preserved in the Hom. perfects πεφύκ-ᾶσι, λελόγχ-ᾶσι, but it disappeared in the present and its place was taken either by the postvocalic form *-ντι* or by the analogical form *-αντι*, as Dor. τίθε-ντι, δίδο-ντι, *ἴστα-ντι*, but Att. τιθέāσι, διδόāσι, *ἴστασι*, from *τιθε-αντι, *διδο-αντι, *ἴστα-αντι, formed in both dialects from the stem-form of the dual and of the other persons of the plural; and similarly Hom. τιθεῖσι, διδοῦσι = Dor. τίθεντι, δίδοντι, but with the circumflex accent after the analogy of *ἰστᾶσι*.

The primary ending of the thematic verbs was *-ντι*, as in Dor. φέρο-ντι, Att. Ion. φέρουσι, Boeot. -νθι, Arcad. -νσι, Lesb. -οισι from *-ο-ντι* = Skr. bháranti, Lat. ferunt, Goth. báirand, Indg. *bhero-nti; subj. Dor. φέρω-ντι, Att. Ion. φέρωσι.

The original secondary endings were: *-έντ*, *-έντ* and *-έντ*. The accented form *-έντ* occurred after consonants in the imperfect of the non-reduplicated athematic verbs and in the optative, as Hom. ἡεν, ἡν, Dor. &c. ἡν which came to be used for the third person singular = Skr. ás-an with regular loss of final *-t*, Indg. *éṣ-ent, they were (§ 452); Skr. ásunv-an, they pressed out; ákrin-an, they bought, corresponding to prim. Gr. *έδεικν-εντ, *έδαμν-εντ, see below; opt. ελεν from *έσγεντ (§ 230), O.Lat. sient, later sint; φέροιεν from *φερογέντ, and similarly δεικνύοιεν, ισταῖεν, τιθεῖεν, διδοῖεν, σταῖεν, θεῖεν, δοῖεν; λίποιεν, φανοῖεν,

λύσοιεν, *λύσαιεν*, but *λύσειαν*, *δείξειαν* with *-αν* for *-εν* after the analogy of the aorist indicative.

The secondary ending *-nt* = prim. Gr. *-α(τ)* occurred after consonants in the imperfect of the reduplicated athematic verbs and in the s-aorist, as prim. Gr. **ἔδιδ-α(τ)*, **ἔτιθ-α(τ)*, **ἔδειξ-α(τ)*. The ending *-α(τ)* was not preserved in the historic period of any of the dialects. From the stem-form of the dual and of the other persons of the plural were formed *ἔτιθε-ν*, *ἔδιδο-ν* with *-ν* after the analogy of thematic verbs like *ἔφερο-ν*, and similarly *ἔθε-ν*, *ἔδο-ν*, *ἔστα-ν*; and in like manner **ἔδειξα* became *ἔδειξαν* after the analogy of *ἔφερο-ν*, and similarly *ἔλυσαν*, *ἔφησαν*, *ῆσαν* (for **ῆαν* after the analogy of *ῆστε*). Forms like *ῆσαν*, *ἔδειξαν*, *ἔλυσαν* gave rise to two kinds of new formations. (1) To the new secondary ending *-αντι* = *-ᾶσι* after the analogy of *ἔφερο-ν* : *φέρο-ντι*, as *δαμνᾶσι*, *δεικνύᾶσι*, *τιθέᾶσι*, *διδόᾶσι*, *ἰστάσι*, see above. (2) The ending *-σαν* became extracted as a personal ending and then extended to the imperfect and aorist of athematic verbs and also to the optative, as *ἴστασαν*, *ἔτιθεσαν*, *ἔδιδοσαν*, *ἔδεικνυσαν*; *ἔστησαν*, *ἔθεσαν*, *ἔδοσαν*, *ἔλυσαν*; *ἴσταίησαν*, *τιθέίησαν*, *διδοίησαν*; *σταίησαν*, *θείησαν*, *δοίησαν*.

The secondary ending *-nt* regularly occurred after vowels, as *ἔφερον* = Skr. *ábharaṇ*, Indg. **ébhero-nt*; *ἔλιπον*, *ἔγνον* from **égnawnt*, *ἔβāν* from **ébānt* (§ 70).

Perfect.

§ 440. Singular : The Indg. ending of the first person was *-a* which remained in Greek, as *οἶδα*, *δέδορκα* = Skr. *vēda*, *dadárśa*.

The original ending of the second person was *-tha* which was regularly preserved in *ῆσ-θα* (originally the perfect), Indg. **ēs-tha*, cp. Skr. *ásitha*; *οἶσθα* = Skr. *vēt-tha*, and likewise originally with all stems ending in a dental, as

*πέποισθα, *λέλησθα (§ 110). In these and similar forms the -σθα came to be regarded as a personal ending and was then extended to other tenses, as Hom. τίθησθα, φῆσθα; ἐθέλησθα, εἴπησθα, πάθησθα; βάλοισθα, κλαίοισθα. The ordinary ending -as, as in λέλοιπας, was a new formation from the first aor. indicative owing to the ending of the first person being alike in both tenses. And conversely the first aor. ending -e of the third person was from the perfect for a like reason.

The original ending of the third person was -e which remained in Greek, as οἶδε, δέδορκε = Skr. vēda, dadárśa.

§ 441. With the exception of the first person plural the Greek and Sanskrit endings of the dual and plural are entirely different, cp. Skr. dual -vá, -áthur, -átur; plural -má, -á, -úr. On Skr. -má beside Gr. -μεν see § 437. In Greek the endings are the same as in the present indicative, as ἵστον, ἵστον; ἵσ-μεν (Hom. ἵδ-μεν, Skr. vid-má), ἵσ-τε, ἵσ-ᾶσι from -αντι (§ 69); λελοίπ-α-τον, λελοίπ-α-μεν, λελοίπ-α-τε, λελοίπ-ᾶσι. The -α- in these forms was of the same origin as in the first aor. indicative, ἐλύσα-τον, ἐλύσα-μεν, &c. (§ 507). On the perfect ending -ᾶσι in Hom. πεφύκ-ᾶσι, λελόγχ-ᾶσι see § 439.

2. THE ENDINGS OF THE MIDDLE.

Singular.

§ 442. It is impossible to determine what were the original primary and secondary endings of the first person. The Greek primary ending -μαι and the secondary ending -μην, -μᾶν are not found in any of the other Indg. languages. It is possible that -μαι was originally the primary ending of the athematic verbs which became generalized in Greek. The original ending of the perfect seems to have been -ai which corresponds to the -ē in Skr. tutud-é = Lat. tutud-i (originally the middle). Sanskrit then generalized the -ē, cp. τίθεμαι : Skr. dadh-ē, φέρομαι : Skr. bhár-ē, and

similarly *δείκνυμαι*, *δάμναμαι*; *τιθῶμαι*, *φέρωμαι*; *δέδομαι*: Skr. *dad-é*, and similarly *δέδειγμαι*, *λέλυμαι*, *γέγραμμαι*.

Secondary ending -*μην* : *ἐτιθέμην*, *ἔδιδόμην*, *ἐδεικνύμην*, *ἐφερόμην*; *τιθείμην*, *διδούμην*, *φερούμην*; *ἐδεδόμην*, *ἐδειγμην*, *ἐλελύμην*. The origin of this ending is obscure.

§ 443. The original primary ending of the second person was -*sai* = -*σαι*, Skr. -*sē*, Goth. -*za*, as *τίθεσαι*, *δίδοσαι*, *δέδοσαι* = Skr. *dhat-sē*, dat-*sē*, dadi-*šē*; *φέρεαι*, *φέρη* (written -*ει* on Attic inscriptions from the fourth century B.C. onwards) = Skr. *bhára-sē*, Goth. *baíra-za*; *φέρηαι*, *φέρη* for the regular form **φερεψ*; *γέγραψαι*, *τέτριψαι*. The intervocalic -*σ-* regularly disappeared, as in *φέρεαι*, *φέρη* (§ 218, 2), but in Attic and Ionic the -*σ-* was restored in the present and perfect of the athematic verbs after the analogy of perfects the stem of which ended in a consonant, as in *γέγραψαι*, and similarly in the imperfect and pluperfect.

The original secondary ending was -*so* in the thematic and -*thēs* = -*θης*, Skr. -*thāḥ* in the athematic verbs. Greek generalized the former and Sanskrit the latter form, cp. -*τίθεσο*, *ἔδίδοσο*, *ἐφέρεο*, *ἐφέρου* beside Skr. *ádhāt-thāḥ*, *ádat-thāḥ*, *ábhara-thāḥ*; *ἔθου*, *ἔδον*; *τιθεῖο*, *διδοῖο*, *φέροιο*; *ἐλῆστω* (Hom. -*ao*, Dor. -*ā*), *ἐπρίω*; *ἐδέδοσο*, *ἐγέγραψο*, *ἐλέλυσο*. On the intervocalic -*σ-* see above. The secondary ending -*thēs* was preserved in the aor. passive *ἐδόθης* = Skr. *ádi-thāḥ*.

§ 444. The original primary ending of the third person present was -*tai* (= -*ται*, Boeot. -*τη*, Thess. -*τει*, Arcad. and Cyprian -*τοι* for -*ται* after the analogy of the secondary ending -*το*, Skr. -*tē*, Goth. -*da*) which remained in Greek, as *τίθεται*, *ἥσται*, *φέρεται* = Skr. *dhat-té*, *ás-tē*, *bhára-tē* (Goth. *baíra-da*). The perfect had the ending -*ai* = Skr. -*ē*, but in Greek the ending of the present was extended to the perfect, cp. *δέδοται*, *πέπισται* beside the Skr. *dad-é*, *bubudh-é*.

The original secondary ending was **to* = *-το*, Skr. *-ta*, Lat. *-tu-*, as *ἔδοτο*, *ἔφέρετο*, *τιθεῖτο*, *φέροιτο* = Skr. *ádi-ta* (Lat. *da-tu-r* from **da-to-r*), *ábhara-ta*, *dadhī-tá*, *bhárē-ta*.

Dual.

§ 445. It is impossible to determine what were the original personal endings of the three persons of the dual, because the Greek and the Sanskrit endings do not agree in form.

-μεθον, the ending of the first person, is from the plural ending *-μεθα* with *-ov* from *-σθον*. According to Kühner, *Ausführliche Grammatik der griech. Sprache*, vol. ii, p. 70, it only occurs three times in good authors, viz. *περιδώμεθον*, Hom. *Il.* xxiii. 485; *όρμώμεθον*, Soph. *Ph.* 1079, and *λελείμ-μεθον*, *El.* 950.

The origin of the Greek endings of the second and third persons is unknown.

The primary and secondary ending of the second person is *-σθον*, cp. *τίθεσθον*, *φέρεσθον* beside Skr. *dadh-áthē*, *bhárēthē*; *ἐτίθεσθον*, *ἐφέρεσθον* beside Skr. *ádadh-áthām*, *ábharēthām*.

The primary ending of the third person is *-σθον* and the secondary *-σθην*, Dor. *-σθān*, as *τίθεσθον*, *φέρεσθον* beside Skr. *dadh-átē*, *bhárētē*; *ἐτίθέσθην*, *ἐφερέσθην* beside Skr. *ádadh-átām*, *ábharētām*.

Plural.

§ 446. The original primary ending of the first person was *-medhai* = Skr. *-mahē*, beside the secondary ending *-medhē* = *-μεθα*, Skr. *-mahi*. Greek generalized the latter form, cp. *τιθέμεθα*, *φερόμεθα* beside Skr. *dádh-mahē*, *bhárā-mahē*; *ἐτιθέμεθα*, *ἐφερόμεθα* = Skr. *ádadh-mahi*, *ábharā-mahi*. The poet. ending *-μεσθα* had its *-σ-* from *-θē*.

§ 447. *-σθε* was used for the primary and secondary ending of the second person in all the dialects. The origin

of this form is unknown. In Sanskrit the primary ending is *-dhvē* and the secondary *-dhvam*, cp. *τίθεσθε*, *ἐτίθεσθε*, *φέρεσθε*, *έφέρεσθε* beside Skr. *dhad-dhvē*, *ádhad-dhvam*, *bhára-dhvē*, *ábhara-dhvam*. On forms like *ἔσπαρθε*, *ἔσταλθε* from **ἔσπαρσθε*, **ἔσταλσθε* see § 221.

§ 448. The original primary endings of the third person were *-ntai* (= *-νται*, Skr. *-ntē*, Goth. *-nda*) after vowels and *-ṇtai* (= *-atai*, Skr. *-atē*) after consonants. The former ending occurred in the present of the thematic verbs and the latter in the athematic, as *φέρονται* = Skr. *bhára-ntē*, Goth. *baíra-nda*; Hom. *ἥ-αται* = Skr. *ás-atē*, Indg. **és-ṇtai*, Att. *ἥ-ηται* was a new formation after the analogy of the thematic presents like *φέρονται*; prim. Gr. **τιθ-αται*, **διδ-αται* = Skr. *dádh-atē*, *dád-atē*. *τίθενται*, *δίδονται*, *δείκνυνται*, &c. were new formations formed from the stem-form of the dual and the other persons of the plural + *-νται* after the analogy of the thematic verbs like *φέρονται*; and similarly with the stem-form of Ion. *τιθέ-αται*, *διδό-αται*, &c. for **τιθ-αται*, **διδ-αται*, &c. The perfect had the ending *-νται* beside *-αται* just as in the present. Regular forms were: *δεδούλωνται*, *βέβληνται* beside *τετράφαται*, *τετάχαται*, *κεκλίαται*, *κεχύαται*, and then after the analogy of these and similar forms were made on the one hand forms like *κέκρυνται*, *λέλυνται*, and on the other hand Hom. *βεβή-αται*, &c. After about the beginning of the fourth century B.C. the perfects in *-αται* and the pluperfects in *-ατο* disappeared and their place was taken by periphrastic forms.

The secondary endings were *-nto* (= *-ντο*, Skr. *-nta*, Lat. *-ntu-*) after vowels and *-ṇto* (= *-ατο*, Skr. *-ata*) after consonants, as *έφέροντο* = Skr. *ábhara-nta*, cp. Lat. *fer-ntu-r*; *ἴμ-πληντο*, cp. Lat. *im-ple-ntu-r*. Hom. *ἥ-ατο* = Skr. *ás-ata*, Indg. **és-ṇto*, Att. *ἥ-ντο* was a new formation after the analogy of *έφέροντο*, &c.; prim. Gr. **έτιθ-ατο*, **έδιδ-ατο* = Skr. *ádadh-ata*, *ádad-ata*. *ἐτίθεντο*, *έδίδοντο*,

έδείκνυντο, &c. were new formations of the same kind as in the present; and similarly with the aor. *έλύσαντο*, *έδειξαντο*, *έπριαντο* for older **έλυσ-ατο*, &c.; opt. Hom. *φέροιάτο* beside the new formations *φέρωντο*, *λύσαντο*, *δείξαντο*, *δεικνύοντο*, *τιθεῖντο*, *διδοῖντο*, &c. Regular forms of the pluperfect were: *έδεδούλω-ντο* beside *έτετράφ-ατο*, *έτετάχ-ατο*; new formations after the analogy of the former were *έλέλυντο*, *έκέριντο*, &c. and after the latter Ion. *έβεβλή-ατο*, &c.

FORMATION OF THE PRESENT.

§ 449. The classification of the various ways in which the present was formed in Greek must be more or less arbitrary according as we regard this or that factor as being a sufficient characteristic to constitute a distinct class. In this grammar the formations of the present are divided into twelve classes, viz. Class I containing monosyllabic athematic light or heavy ablaut-bases; Class II containing reduplicated monosyllabic athematic heavy ablaut-bases; Class III containing verbs of the type *φέρω*, formed from dissyllabic light bases; Class IV containing heavy ablaut-bases with and without reduplication; Classes V–VIII containing the nasal-presents; Class IX the s-presents; Class X the sko-presents; Class XI the dental-presents; and Class XII the j-presents. The characteristic elements *-sko-*, &c. used in forming the present stem were often extended to other tense-stems. It should be noted that the word present as used above not only includes the present in the narrower sense but also the imperfect and aorist.

§ 450. In the parent Indg. language the conjugation of the present was divided into two great classes—athematic and thematic. In the athematic conjugation the personal endings were added direct to the bare base. In monosyllabic bases the accent was on the base in the active singular and on the personal endings in the dual and

plural. And the base had accordingly the strong grade of ablaut in the active singular, but the weak grade in all other forms, as *éi·mi, *I go*, *éi·si, *éi·ti, pl. *i·més, *i·t(h)é, *j·énti. In dissyllabic heavy bases the accent was on the first syllable of the base in the active singular and on the personal endings in the dual and plural. The first syllable of the base had accordingly the strong grade of ablaut and the second syllable the weak grade in the active singular, but in the dual and plural both syllables had the weak grade. Thus from an original base *genō- we have the two types *génə-, *gnō- (§ 458). The present indicative was *génə·mi, *génə·si, *génə·ti, pl. *gnə·més, *gnə·t(h)é, *gn(ə)·énti, but the aorist *gnō·m, *gnō·s, *gnō·t, pl. *gnō·m- (§ 437), *gnō·te, *gnō·nt = ἔ·γνων, &c. Only middle forms of the type *génə- were preserved in Greek, all the active forms passed over into the thematic conjugation in the prehistoric period of the language (see § 458). The athematic conjugation was well preserved in Aryan and to a great extent in Greek, but in most of the other languages, including the Latin and the Germanic, the verbs originally belonging to this conjugation almost entirely passed over into the thematic conjugation.

The thematic conjugation had the thematic vowels -e-, -o- before the personal endings (§ 458). The accent was on the root-syllable throughout the present and on the thematic vowel throughout the aorist, as *léiqō, *léiq·e·si, *léiq·e·ti, pl. *léiq·o·mes, *léiq·e·t(h)e, *léiq·o·nti = λείπω, λείπομεν, &c., beside the aorist *liqō·m, *liqé·s, *liqé·t, pl. *liqō·m-, *liqé·te, *liqō·nt = ἔ·λιπον, ἔ·λιπομεν, cp. λιπέν with preservation of the original accent. The presents of primary verbs of the type λείπω, φέρω, &c. originally belonged to the athematic conjugation, but already in the parent Indg. language nearly all of them passed over into the thematic conjugation with the -e-, -o- from the aorist type ἔ·λιπον, ἔ·λιπε·s, &c. The -e-, -o- in the aorist type

*lique-, *liquo- was originally an integral part of the base, but in course of time *liq- came to be regarded as the base and the -e-, -o- as part of the ending. But seeing that the accent was originally always on the -e-, -o- it is difficult to account for the difference in their quality. How the -o- came to be confined to the first person singular and the first and third persons plural, and the -e- to the other forms of the singular, dual and plural, remains an unsolved problem.

§ 451. Before beginning to compare the Greek paradigms with those of the other languages the student should read carefully §§ 432-48 dealing with the personal endings, because what is stated there about these endings will not as a rule be repeated in the following paragraphs.

CLASS I.

UNREDUPPLICATED MONOSYLLABIC ATHEMATIC LIGHT OR HEAVY ABLAUT-BASES.

§ 452.	Indg.	Gr.	Skr.
Sing. 1.	*é̄s-mi	ε̄μι	ásmi
2.	*é̄s-si, *é̄si	ε̄ι	ási
3.	*é̄s-ti	ε̄στι	ásti
Dual 2.	*s-tés, *s-thés	ε̄στόν	stháḥ
3.	*s-tés	ε̄στόν	stáḥ
Plur. 1.	*s-més	ε̄σμέν	smáḥ
2.	*s-t(h)é	ε̄στέ	sthá
3.	*s-énti	ε̄στί	sánti

Indg. *é̄s-mi regularly became ε̄μí, Dor. ἡμí, Lesb. Thess. ἐμí (§ 214), Skr. ásmi, Goth. im, Lith. esmì. ε̄i from Indg. *é̄si = Skr. ási, Lat. es, Goth. is, beside Hom. ε̄σ-σí = Indg. *é̄s-si; Hom. ε̄ls with -s added after the analogy of forms like τίθης. ε̄στí = Skr. ásti, Lat. est, Goth. ist, Indg. *é̄s-ti. In Greek the -e- of the singular was levelled out into the dual and plural. On the personal

endings, see §§ 438–9. Att. *éσμέν* with *-σ-* from *éστέ*, the regular form occurs in Ion. *εἰμέν*, Dor. *εἰμές*. *εἰσί* = Dor. Boeot. *ἐντί* for **έντι* (= Skr. *sánti*, Indg. **s-énti*) with *é-* for *é-* after the analogy of other forms of the present; Hom. *ἐ-ᾶσι* from **έσαντι* (§ 439).

Imperfect.

	Indg.	Gr.	Skr.
Sing. 1.	* <i>é̄s-m</i>	ἡα, ḥ, ḥν	ásam
	* <i>é̄s-s</i>	ἡσθα	ás(i)h
	* <i>é̄s-t</i>	ἥν	ás(i)t
Dual 2.	* <i>é̄s-tom</i>	ἥστον, ḥτον	ástam
	* <i>é̄s-tám</i>	ἥστην, ḥτην	ástām
Plur. 1.	* <i>é̄s-men, -mṇ</i>	ἥμεν	ásma
	* <i>é̄s-te</i>	ἥστε, ḥτε	ástā
	* <i>é̄s-ent</i>	ἥσαν	ásan

ḥ contracted from older (Hom.) *ḥa* = Indg. **é̄s-m*. *ḥn* was a new formation with *-ν* from forms like *έτιθην*; *ḥ*, *ḥa* regularly fell together with the perfect = Indg. **é̄s-a*, Skr. *ása* (§ 517); and similarly *ἥστον*, *ἥμεν*, *ἥστε*. *ἥσθα* was the old perf. form used for the imperfect; the regular form would have been **ḥs* = Vedic *áh*; the late form *ḥs* was a new formation. *ḥn* contracted from older (Hom.) *ḥen* was originally the third pers. plural which came to be used for the singular, see below; the regular form was preserved in Dor. *ḥs* = Vedic *áh*, Indg. **é̄s-t*. *ἥτον*, *ἥτην*, *ἥτε* beside the regular forms *ἥστον*, *ἥστην*, *ἥστε* were new formations after the analogy of *ἥμεν* (§ 214), Dor. *ἥμες* with primary ending. *ἥσαν* was a new formation with *ἥσ-* from *ἥστε* and the *-av* in forms like *ἔλυσαν*, *ἔδειξαν* (§ 439); after this form had come into existence the regular old plural *ἥεν*, *ἥν* (= Indg. **é̄s-ent*, Skr. *ásan*) came to be used for the singular. The long *é* of the singular was levelled out into the dual and plural already in the Indg. period.

§ 453.	Indg.	Gr.	Skr.
Sing. 1.	*éi·mi	εῖμι	émi
2.	*éi·si	εἰ	éši
3.	*éi·ti	εῖσι	éti
Dual 2.	*i·t(h)és	ἴτον	itháḥ
3.	*i·tés	ἴτον	itáḥ
Plur. 1.	*i·més	ἴμεν	imáḥ
2.	*i·t(h)é	ἴτε	ithá
3.	*j·énti	ἴασι	yánti

εἰ from older *εῖσι = Skr. éši, Lat. eis, is, Indg. *éi·si; Hom. εἰσθα with -σθα from ἴσθα (§ 452). εῖσι from εῖτι (§ 169) which was preserved in ἔξειτι·ἔξελεύσεται (Hesych.). ίασι for *έντι (= Skr. yánti, Indg. *j·énti) was a new formation like ίασι (§ 452).

Imperfect.

	Indg.	Gr.	Skr.
Sing. 1.	*éj·m	ἥα, ἥειν	áyam
2.	*éi·s	ἥεις, ἥεισθα	áiḥ
3.	*éi·t	ἥει(ν)	áit
Dual 2.	*éi·tom	ἥτον	áitam
3.	*éi·tām	ἥτην	áitām
Plur. 1.	*éi·men, ·mṇ	ἥμεν	áima
2.	*éi·te	ἥτε	áita
3.	*éj·ent	ἥσαν, ἥεσαν	áyan

The stem-form of the singular was levelled out into the dual and plural already in the Indg. period. Regular forms were ᥃τον, ᥃την, ᥃μεν, ᥃τε. ᥃α for *ἥα (§ 128) with ᥃ after the analogy of ᥃τον, &c. ᥃ει(ν) and ᥃εσαν were aorist forms, the former of which gave rise to the new formations ᥃ειν, ᥃εις, ᥃εισθα. The regular forms of the singular would have been *ἥα, *ἥs, *ἥ. The Hom. forms ᥃ε(ν), ᥃ομεν were formed after the analogy of the thematic verbs.

§ 454. Other examples of verbs belonging to Class I are .
 φημί, Dor. φᾶμί with shifted accent : φαμέν, ἔφην : ἔφαμεν ;
 *ἔδων : ἔδομεν = Skr. á-dā-m : *á-di-ma ; *ἔθην : ἔθεμεν =
 Skr. á-dhā-m : *á-dhi-ma ; ἔστην, Dor. ἔσταν : *ἔσταμεν =
 Skr. á-sthā-m : *á-sthi-ma. In Sanskrit the long vowel of
 the singular was levelled out into the dual and plural,
 whence ádāma, ádhāma, ásthāma, and similarly ἔστημεν
 for *ἔσταμεν. Middle κεῖται = Skr. śéte, *he lies down*,
 ἥσται (with the rough breathing from éd-, *sit*) = Skr. ástē,
he sits, with ε̄, ḷ from the original active singular.

CLASS II.

REDUPLICATED MONOSYLLABIC ATHEMATIC HEAVY
ABLAUT-BASES.

§ 455. The presents of this class were formed from the aorist of monosyllabic bases to which the original presents had been lost already in the Indg. period, as τí-thη-mi : *é-thη-n = Skr. dá-dhā-mi : á-dhā-m ; δí-dw-mi : *é-dw-n = Skr. dá-dā-mi : á-dā-m. On the difference between the Greek and the Sanskrit vowel in the reduplicated syllable, see § 429. The inflexion was the same as in Class I except in the third person plural.

	Indg.	Gr.	Skr.
Sing. 1.	*dí-dhē-mi	τí-thημι'	dádhāmi
	*dí-dhē-si	τí-thης	dádhāsi
	*dí-dhē-ti	τí-thησι	dádhāti
Dual 2.	*dí-dhē-t(h)és	τí-thēτον	dhattháḥ
	*dí-dhē-tés	τí-thēτον	dhattáḥ
	*dí-dhē-més	τí-thēμεν	dadhmáḥ
Plur. 1.	*dí-dhē-t(h)é	τí-thēτε	dhatthá
	*dí-dhē-t(h)é	τí-thēāσι (§ 439)	dádhāti
	*dí-dh(ə)-ŋti	τí-thēāσι (§ 439)	dádhāti

In Sanskrit the ·dh· of the third person plural became generalized in the dual and plural, and conversely in Greek

the *-θε-* became extended to the third person plural. Like *τίθημι* : *τίθεμεν*, *τίθεμαι* are also inflected *δίδωμι* : *δίδομεν*, *δίδομαι*; *ἴσταμι*, Att. Ion. *ἴστημι* from **σί-σταμι* : *ἴσταμεν*, *ἴσταμαι*. Imperfect *ἐτίθην* : *ἐτίθεμεν*; *ἐτίθεις*, *ἐτίθει* were formed after the analogy of the thematic verbs, and similarly *ἔδίδουν*, *-ους*, *-ου*, and the imperative *τίθει*, *δίδου*.

CLASS III.

DISSYLLABIC LIGHT BASES WITH OR WITHOUT
REDUPLICATION.

a. Without Reduplication.

§ 456. The verbs of this class belong to the so-called thematic conjugation (§ 450). Two types are to be distinguished according as the first or the second vowel of the base originally had the accent, as **lēiq(e)*-, **liqé*-, leave, cp. *λείπω* : *λιπεῖν*, *φεύγω* : *φυγεῖν*, *τρέπω* : *τραπεῖν*, *ἔπομαι* from **έπομαι* : *έσπόμην*. The type **lēiq(e)*- with regular loss of the final e (§ 450) was originally inflected like a verb of Class I, as **lēiq-mi*, pl. **liq-més* = **λείπμι*, **λιπμέν*. But already in the parent Indg. language nearly all the verbs of this type passed over into the thematic conjugation, as *ἔρπω*, *λέγω*, *φέρω*, *δέρκομαι*, *τρέφω*, *πείθω*, *ἐρείκω*, *ἐρείπω*, *στείχω*, *κεύθω*, *πεύθομαι*, *ἐρεύγομαι*, *τεύχω*, *θήγω*, &c., cp. Skr. *bhárti* beside *bhárti*, *he bears*, *φέρετε* beside *φέρτε*, Lat. *fero*, *volo* beside *fert*, *vult*. The type **liqé*-—with preservation of the original accent in the infinitive *λιπεῖν*—was chiefly aorist in function, as *ἔλιπον*, *ἔτραφον*, *ἔδρακον* (Skr. *ádr̥śam*), *ἥριπον*, *ἥρικον*, *ἔπιθον*, *ἔστιχον*, *ἔκυθον*, *ἥρυγον*, *ἔτυχον*, *ἔφυγον*, &c. (§ 505). How this difference in function between the two types originally came about is unknown (cp. § 426). Side by side with the type **liqé*- with the function of an aorist, there exists in all the Indg. languages a certain number of presents the

stem-syllable of which is aorist in form, as *γλύφω*, *τύφω*, *γράφω*, *γλάφω*, Dor. *τράπω*, *τράφω*; Skr. *dáśati* = Indg. *dñkéti, *he bites*, *jívati*, *he lives*; Goth. *trudan*, *to tread*; OE. *cuman*, *to come*, &c. Such presents are usually called aorist-presents in contradistinction to presents like *λείπω*, *φέρω* which are called imperfect-presents. The inflexion of *φέρω* will serve as a model for all presents of this class. On the endings in the Greek forms see the paragraphs dealing with the personal endings.

	Indg.	Gr.	Skr.	Goth.
Sing.	1. *bhérō	φέρω	bhárāmi	baíra
	2. *bhére-si	φέρεις	bhárasi	baíris
	3. *bhére-ti	φέρει	bhárati	baíriþ
Dual	2. *bhére-t(h)es	φέρετον	bhárathah	
	3. *bhére-tes	φέρετον	bháratah	
Plur.	1. *bhéro-mes	φέρομεν,	bhárāmaḥ	baíram
		Dor. -μες		
	2. *bhére-t(h)e	φέρετε	bháratha	baíriþ
	3. *bhéro-nti	φέρουσι,	bháranti	baírand
		Dor. -οντι		

Imperfect.

	Indg.	Gr.	Skr.
Sing.	1. *é-bhero-m	ἔφερον	ábharam
	2. *é-bhere-s	ἔφερες	ábharaḥ
	3. *é-bhere-t	ἔφερε	ábharat
Dual	2. *é-bhere-tom	ἔφέρετον	ábharatam
	3. *é-bhere-tām	ἔφερέτην	ábharatām
Plur.	1. *é-bhero-men, -m̥n̥	ἔφέρομεν	ábhārāma
	2. *é-bhere-te	ἔφέρετε	ábhārata
	3. *é-bhero-nt	ἔφερον	ábhāran

In like manner is also inflected the second or strong aorist, *ἔλιπον*, &c. (§§ 503, 505).

b. With Reduplication.

§ 457. In the reduplicated verbs belonging to this class three sub-divisions are to be distinguished according as the reduplicated syllable contains *i*, *e* or a fuller reduplication (§ 429).

1. Verbs with *i* in the reduplicated syllable have weak grade stems of the type *liqé-, as γί-γνο-μαι, cp. Lat. *gi-gno*; μί-μνω : μένω, ἵσχω from *σι-σχω : ἔχω from *τεχω, πῖ-πτω with *i* after the analogy of ρῖπτω : πέτο-μαι, νίσομαι from *νι-νσο-μαι : νέομαι from *νεσο-μαι, τίκτω from *τι-τκω : ἔ-τεκον, ἵξω from *σι-σδω : ἔδος from *σεδος ; cp. Skr. tí-śtha-ti, *he stands*, Lat. sistit.

2. Verbs with *e* in the reduplicated syllable, preserved only in aorists like ἔ-πε-φνο-ν, inf. πε-φνέ-μεν : base *ghén(e)-, ghné-; ἔ-σπε-το, inf. ἔ-σπέ-σθαι, cp. Skr. sá-śca-ti, Indg. *se-sqe-ti, *he follows* : Lat. sequi-tur ; ἔ-κέ-κλε-το : κέλο-μαι, τε-τάρπε-το : τέρπω, ἔ(τ)ειπον, εἰπον, Indg. *e-we-wqo-m.

3. Verbs with fuller reduplication, preserved only in aorists like ḥγ-αγο-ν, inf. ḥγ-αγεῖν : ḥγω ; ḥρ-αρο-ν, inf. ḥρ-αρεῖν ; ḥν-εγκο-ν, inf. ḥν-εγκεῖν ; ḥρ-ορο-ν : pres. ḥρ-νῦ-μι.

CLASS IV.

DISSYLLABIC ATHEMATIC HEAVY ABLAUT-BASES WITH
OR WITHOUT REDUPLICATION.

a. Without Reduplication.

§ 458. In the dissyllabic heavy ablaut-bases the first syllable contained a short vowel or diphthong and the second a long vowel or a long diphthong, as *petā-, *genō- (*genē-), *menē-. According as the accent was originally on the first or second syllable we get the two types *péte- (pétra-μαι), *génə-, *ménī- (where ī is a contraction of ei (§ 88) and i is the weakest grade of ablaut), and *ptā-

(*πτῆναι*, Dor. ē-*πτᾶν*), *gnō̄- (*έ-γνων* and *gnē̄* in OE. *cnā-wan*, *to know*), *m̄g-é(i) (*ē-μάνην*).

Only middle forms of verbs of the type *pétə- were preserved in Greek, all the active forms passed over into the thematic conjugation in the prehistoric period of the language and similarly in all the other languages except the Aryan branch, as *πέτα-μαι*, *ἄγα-μαι*, *ἔρα-μαι* beside the new thematic formations, *πέτο-μαι*, *ἀγάο-μαι*, *ἐράο-μαι* (Att. *έράω*), *κρέμα-μαι*. But on the other hand Lat. *vomo*, *ēmēw* for *fēma-*μι* or *fēme-*μι* = Skr. *vámi-mi*, cp. *ēμε-σσα*, *ήμε-σα*; *δαμάω* for *dāma-*μι*, and similarly *ēlāw*, *γελάω*, *ἀρώω*, &c., cp. Skr. *áni-mi*, *I breathe*; *svápi-mi*, *I sleep*; *rōdi-mi*, *I weep*.

The long vowel in the type *ptā-, *gnō̄- belonged in the parent Indg. language to all numbers of the active and middle. The forms of this type often had the function of an aorist, as Hom. *πλῆτο* : Skr. *á-prāt*, *he filled*, base *plē- beside *péta-; *πτῆναι*, ē-*πτην* : *πέτα-μαι*; ē-*δρᾶν* beside Skr. *drá-ti*, *he runs*; ē-*γνων* : Skr. *jñā-táh*, Lat. (*gjnō̄-tus*, *known*; and similarly ē-*βλην*, ē-*σβην*, ē-*τλην* Dor. ē-*τλᾶν*, ē-*βην* Dor. ē-*βᾶν* = Skr. *ágām*, Att. ē-*γήρᾶν* : *γηράσκω*; Hom. *πλῆτο* : *πελάῶ*, cp. Dor. *ā-πλᾶτος*. The -ē-formations with intransitive meaning became productive in Greek in the shape of the so-called passive aorist, which was originally active both in form and meaning (§§ 503, 506). Examples of -ē- in other than aorist forms are: *ἄη-σι* = Skr. *vā-ti*, *he blows*; Lat. *im-plē-s*, Skr. *prā-si*, *thou fillest*.

Beside the type *petā-, &c. with long vowel in the second syllable there also existed the type *menēi- with long diphthong. These two types began to be mixed up already in the parent language owing to the frequent loss of the second element of long diphthongs (§ 63). It is often therefore no longer possible to keep the two types rigidly apart. When the Indg. accent was on the first syllable,

the long diphthong became weakened to *-eɪ-* which regularly became *-i-* (§ 88) and in its weakest form *-i-*, cp. Skr. *ámi-ti*, *he injures*; *brávī-ti*, *he says*, and forms like Lat. *farcīs* beside *cupīs*. The presents of this type partly went over into the thematic conjugation already in the parent Indg. language and became mixed up with the jo-verbs (§ 481), as *μαίνομαι*, *φαίνομαι*, *χαίρω*, *τύπτω*, Hom. *ρήσσω*, from **μανjομαι*, **φανjομαι*, **χαρjω*, **τυπjω*, **ρηκjω*; *ἔζομαι* from **σεδjομαι* : Lat. *sedē-re*; *δέω* from **όδjω* : *όξj-σω* for **όδη-σω*. The *-i-* also occurs in characterized presents like *εύρi-σκω* : *εύρj-σω*, *στερi-σκω* : *στερj-σω*, *ἀλi-σκομαι* : *ἀλώ-nai*. When the Indg. accent was on the second syllable, the long vowel—originally long diphthong—remained, whence *ἐμάνην* beside *μαίνομαι*, and similarly *ἐφάνην*, *ἐχάρην*, *ἐτύπην*, *ἐρράγην*, &c. (§ 506), which as we have seen above became productive in Greek and eventually came to be passive aorist in meaning.

b. With Reduplication.

§ 459. *βί-βη-σι*, Skr. *jí-gā-ti*, *he goes*; *δί-ξη-μαι* from **δi-δjā-μαι* beside *δi-ξo-μαι* from **δi-δjō-μai*; *ἴλη-μι* from **σi-σλη-μi* beside *ἴλa-μai* from **σi-σλa-μai*; *κί-χρη-μi*: *κí-χρa-μai*. Presents like *πíμ-πλη-μi*, *πíμ-πρη-μi* had the nasal in the reduplicated syllable after the analogy of verbs of the type *λιμπάνω* (§ 467), and forms like *πíμπλάμεν* : *πíμπλημi* were new formations after the analogy of *ἴσταμεν* : *ἴστημi* (§ 455).

CLASSES V-VIII.

§ 460. There can hardly be any reasonable doubt that the general principle underlying the formation of the various classes of nasal-presents was originally identical in all the classes, cp. (1) Skr. *aśná-mi*, *I eat*; *aśni-máḥ*, *we eat*; *aśn-ánti*, *they eat*; Gr. *δάμνη-μi*, *δάμνā-μεν* = Indg. **d̥mná-mi*, **d̥mnə-més*. (2) Skr. *stṛṇō-mi*, *stṛṇu-máḥ* =

Gr. *στόρνυ-μι*, *στόρνυ-μεν*, Indg. *st̥n̥éu-mi, *st̥n̥u-més. (3) Skr. *yunáj-mi*, *I yoke*; pl. *yuñj-máḥ*, *we yoke*, Indg. *junéq-mi, *jung-més; Skr. *chinád-mi*, *I destroy*; pl. *chind-máḥ*: Lat. *scindo*, Gr. *σχίζω* from *σχιδjō. (4) Skr. *vindá-ti*, *he finds*; Skr. *yuñjá-ti*, *lumpá-ti* = Lat. *jungit*, *rumpit*, cp. also Engl. *stand* : *stood*. Besides having the characteristic feature of nasal-infix it should be noted that the root-syllable of all these types of verbs had originally the weak grade of ablaut. In verbs of the type *δάμνη-μι*, *στόρνυ-μι* the nasal was infixes before the last element of the dissyllabic base, Indg. *dm̥-á-, *st̥-éu-. The -ná-, -nə-, and -néu-, -nu- came to be regarded as suffixes already in the parent language, and then became extended by analogy to root-forms to which they did not originally belong. In verbs of the type Skr. *yunáj-mi*, -ne-, the strong grade form of -n-, was infixes before the final consonant of the root-syllable. This type of present was only preserved in the Aryan group of languages. The types (1), (2), and (3) were inflected according to the athematic conjugation with the accent in the singular on the second syllable of the base which had full grade vowel, and in the dual and plural on the ending, as *dm̥ná-mi, *st̥n̥éu-mi, *junéq-mi, pl. *dm̥nə-més, *st̥n̥u-més, *jung-més. In verbs of the type Skr. *yuñjá-ti*, *lumpá-ti* = Lat. *jungit*, *rumpit*, Indg. *jungé-ti, *rumpé-ti the nasal was infixes before the final consonant of the root-syllable. The verbs of this type belonged to the thematic conjugation.

In the present state of our knowledge of the parent Indg. language it is impossible to determine what was the original function and meaning of the nasal-infix. It is also unknown how it came about that the nasal became infixes, because the infixing of formative elements is otherwise unknown in the Indg. languages.

CLASS V.

§ 461. To this class belong verbs of the type δάμνημι : δαμά-σαι, ἐδάμα-σα ; πίτνημι : πετά-σαι, ἐπέτα-σα ; Skr. aśnāmi, *I eat* ; krīṇāmi, *I buy* ; μάρναμαι : μαρα-σμός, cp. Skr. mr̥ṇāmi, *I crush, destroy*. Sanskrit has -nī- for -ni- in the dual and plural after the analogy of verbs of Class IV (§ 458).

	Indg.	Gr.	Skr.
Sing. 1.	·ná-mi	δάμνημι	krīṇāmi
	·ná-si	δάμνης	krīṇāsi
	·ná-ti	δάμνησι	krīṇāti
Dual	·nə-t(h)és	δάμνατον	krīṇītháḥ
	·nə-tés	δάμνατον	krīṇītāḥ
Plur.	·nə-més	δάμναμεν	krīṇīmáḥ
	·nə-t(h)é	δάμνατε	krīṇīthá
	·n(ə)-énti	δάμνασι (§ 439)	krīṇánti

And similarly Att. πέρνημι with -e- after the analogy of περάω, ἐπέρα-σσα. The -i- in the root-syllable of the following verbs has never been satisfactorily explained :— κίρνημι : κεράω, ἐκέρα-σσα ; κρίμνημι : ἐκρέμα-σσα ; πίτνημι : ἐπέτα-σσα ; *όριγναμαι : ὄρέγω ; πιλνάμαι : ἐπέλα-σσα ; σκίδναμαι : ἐσκέδα-σσα (cp. § 44, note 1). In δύναμαι the -na- was levelled out into all forms of the verb.

§ 462. Most of the verbs which originally belonged to Class V went over into the thematic conjugation with preservation or loss of the -a- in -να-, as δαμνάω, κιρνάω, δριγνάομαι, πιλνάω, πιτνάω beside δάκνω, κάρνω : κάματος, πίτνω, Hom. Dor. τάμνω, πίνω. It is difficult to account for the strong grade vowel in the root-syllable of Att. τέμνω, Dor. δήλομαι from *δελνομαι beside Att. βούλομαι from *βολνομαι, Lesb. ἀπέλλω, Hom. εἴλομαι from *φελνομαι. Some verbs went over into the jo-conjugation (§ 478), as Lesb. κλίνω, Hom. Att. κλίνω from

*κλιν̄ω : Lat. *in-clī-nā-re*; κρίνω from *κριν̄ω : Lat. *cerno* from *crinō; ὀτρύνω from *ότρυνγ̄ω. This change from the athematic to the thematic conjugation probably began already in the parent Indg. language, cp. Skr. gr̄ná-ti, *he calls, miná-ti, he lessens, mṛná-ti, he destroys*, beside gr̄ná-ti, miná-ti, mṛná-ti; Goth. and·bundnis, *thou becomest unbound*, beside Skr. badhná-si, Indg. *bhñdhná-si, *thou bindest*; Lat. sternit beside Skr. strná-ti, *he strews*.

CLASS VI.

§ 463. To this class belong verbs of the type στόρνυμι, Skr. strñōmi, *I strew* : Goth. stráujan, *to strew*; ὄρνυμι, Skr. gn̄ōmi, *I move*; Hom. τάννυ-ται = Skr. tanu-té : Skr. tanōmi, Indg. *tñ-nó-mi, *I stretch*. In Greek the singular had -νῦ- for -νευ- : -νη- after the analogy of -νᾶ-, Att. Ion. -νη- : -να- in Class V.

Indg.	Gr.	Skr.
Sing. 1. *str̄-néu-mi	στόρνυμι	strñōmi
2. *str̄-néu-si	στόρνυς	strñōsi
3. *str̄-néu-ti	στόρνυσι	strñōti
Dual 2. *str̄-nu-t(h)é	στόρνυτον	strñutháh
3. *str̄-nu-tés	στόρνυτον	strñutáh
Plur. 1. *str̄-nu-més	στόρνυμεν	strñumáh
2. *str̄-nu-t(h)é	στόρνυτε	strñuthá
3. *str̄-nw-énti	στορνύāσι (§ 439)	strñvánti

And similarly Hom. ἀνῦμι, ἦννυ-το : Skr. sanōmi, *I gain, acquire*; ἀρνυμαι, ἄχνυμαι, κίννυμαι, πτάρνυμαι : Lat. sternuo.

This type of present became productive in Greek which gave rise to numerous new formations. The -νῦμι came to be used—irrespectively whether the root-syllable had the weak or strong grade of ablaut—to form the present of bases ending in a guttural, when such bases had an s-aorist, as δείκνυμι : δείξα, and similarly ζεύγνυμι, μείγνυμι (*mígnymi*),

δμόργυνūμι, δρέγυνūμι, πήγυνūμι, πλήγυνūμι, ρήγυνūμι, φράγυνūμι. Other examples of new formations were : δαινūμι : ἔδαισα, Ιον. εἴνūμι, Att. ἔννūμι from *Fεσνūμι : ἔσ-σα, δλληνūμι from *δλνūμι : ἄλεσα, δμνūμι : δμοσα, τείνūμι : ἔτεισα ; δρνūμι for *ἀρνūμι, στόρνūμι for *στρα- or *σταρ-νūμι.

§ 464. The regular form είνūμι from prim. Gr. *Fεσνūμι (§ 214) was preserved in Ionic, but in the prehistoric period of Attic a new present *Fεσνūμι was formed with -σ- from forms like ἔσ-σα, ἔσ-θῆνα. This -σν- became assimilated to -νν- (§ 214), whence ἔννūμι, and similarly σβέννūμι, ζώννūμι. And then after the analogy of these verbs were formed presents like κορέννūμι : ἐκόρεσα, στορέννūμι, ρώννūμι, στρώννūμι, κεράννūμι, κρεμάννūμι, πετάννūμι, σκεδάννūμι.

§ 465. A large number of the verbs which originally belonged to Class VI went over into the thematic conjugation partly in the historic and partly in the prehistoric period of the language. The presents in -νώ are common in Att. Ion. and Doric, as ἀνύω, δεικνύω, μιγνύω, ὀμνύω, ὀρνύω, τανύω, κερανύω, στρωνύω. These presents mostly came into existence in the historic period of these dialects. But many verbs passed over into the thematic conjugation in the prehistoric period of the language, as Hom. ἄνομαι, Att. ἄνομαι from *ἀνfομαι : Skr. sanōmi, I gain, acquire ; θύνω : Skr. dhūnōmi, I shake ; Hom. ικάνω, κιχάνω from *ικανfω, *κιχανfω ; Hom. τίνω, Att. τίνω from *τινfω : Skr. cinōmi, I collect ; Hom. φθάνω, φθίνω, Att. φθάνω, φθίνω from *φθανfω, *φθινfω. In the verbs θύνé(f)ω (Hesiod), ικνé(f)ομαι, κινé(f)ω : κίννμαι, οιχνé(f)ω the change from the one conjugation to the other probably took place at the time when the singular still had *-νευμι, *-νευσ-, *-νευτι for later -νῦμι, -νῦς, -νῦσι. This explains the -ε- which it would be difficult to account for otherwise. As in the verbs of Class V the change from the athematic to the thematic conjugation probably began already in the parent Indg.

language, cp. Skr. *cinvá-ti* beside *cinō-ti*, *he collects*; *gñvá-ti* beside *gnō-ti*, *he moves*; *miná-ti* beside *minō-ti*, *he lessens*. In Latin and the Germanic languages all the verbs originally belonging to this class went over into the thematic conjugation.

CLASS VII.

§ 466. To this class belong the verbs which have a nasal infix before the final consonant of the root-syllable (§ 460). This type of verbs was well preserved in Sanskrit and Latin, cp. Skr. *vindáti*, *he finds*; *yufjáti*, *lumpáti* = Lat. *jungit*, *rumpit*; *kṛntáti*, *he cuts*; *limpáti*, *he smears*; Lat. *findo*, *fundo*, *linquo*, *pango*, *scindo*, *tango*, *vinco*, &c. But in Greek the original formation was only preserved in *ῥέμβομαι*, *σφίγγω*, and possibly in *ἀτέμβω*, *στέμβω*. All the other verbs originally belonging to this class went over either into Class VIII or into the jo-conjugation (§ 478), cp. *λιμπάνω* : **λιμπω*, Lat. *linquo*; *πυνθάνομαι* : **πυνθω*, *πεύθομαι*; *κλαγγάνω* : **κλαγγω*, Lat. *clango*, beside *κλάξω* from **κλαγγώ*; *πλάξω* from **πλαγγώ* : **πλαγγω*, Lat. *plango* (§ 158); *πτίσσω*, *πτίττω* from **πτινσήω*: Lat. *pīnsio*, *pīnso*; *λύξω* from **λυγγώ*. The type of present like *ἀνδάνω* : *ἀδεῖν*, *λαγχάνω* : *ἔλαχον*, *λανθάνω* : *ἔλαθον*, *τυγχάνω* : *ἔτυχον*, *χανδάνω* : *ἔχαδον*, all of which occur in Homer, became productive in the post-Homeric period. After the analogy of these verbs were formed many new presents to strong aorists, as *δαγκάνω* : *ἔδακον*, *έρυγγάνω* : *ἔρυγεῖν*, and similarly *θηγάνω*, *λαμβάνω*, *μανθάνω*, *πανθάνω*, *φυγάνω*. After the analogy of *λιμπάνω* were also formed *πιμπλάνω*, *πιμπράνω*.

CLASS VIII.

§ 467. To this class belong the verbs in *-άνω*. The original type was probably denominative verbs like *θηγάνω* : *θηγάνη*, *θήγανον* (Hesych.); *δλισθάνω* : *δλίσθανος*, as similarly formed denominative presents are also found

in Sanskrit, Armenian, and Lithuanian. The suffix *-aνω* then became productive in the formation of new presents, partly to forms which were already present, and partly to forms with the function of aorist, as *αισθάνομαι* : *άισθω*, *ἀλυσκάνω* : *ἀλύσκω*, *ἀπ-εχθάνομαι* : *ἐχθομαι*, *ανέξάνω* : *ανέξω*, *ἀμβλισκάνω* : *ἀμβλίσκω*, *ἐρῦκάνω* : *ἐρῦκω*, *ἰξάνω* : *ἰστημι*, *ἰσχάνω* : *ἴσχω*, *κενθάνω* : *κενθω*, *ληθάνω* : *λήθω*; *ἀλφάνω*, *κυδάνω*; *ἀμαρτάνω* : *ημαρτον*, *βλαστάνω* : *ἐβλαστον*, *δαρθάνω* : *ἔδαρθον*. It can hardly be an accident that in all verbs of this class the root-syllable is long either by vowel quantity or by position. After the analogy of verbs like *ληθάνω* : *λήθω*, *ἰσχάνω* : *ἴσχω* were formed *λιμπάνω* : **λιμπω*, *κλαγγάνω* : **κλαγγω*, and then *-άνω* became extended to nearly all the verbs of Class VII (§ 466).

NOTE.—In a few verbs beside *-άνω* there are also forms in *-ανάω* (with *-άω* after the analogy of denominative verbs like *τίμάω*, *δαπανάω* : *δαπάνη*), and in *-αίνω* from *-αιγω*, as *ἐρῦκανάω*, *ἰσχανάω* beside *ἐρῦκάνω*, *ἰσχάνω*; *κιδαίνω*, *οιδαίνω*, *δλισθαίνω* beside *κυδάνω*, *οιδάνω*, *δλισθάνω*. See § 478.

CLASS IX.

§ 468. To this class belong the original *s*-presents. The presents of this type were not numerous in the parent Indg. language nor did they become productive in the separate languages. The *-s-* was of the same origin as the *-s-* which occurred in the aorist (§ 507) and in the future (§ 499), and possibly also in the *sko*-presents (§ 469), and was doubtlessly closely connected with the *-s* in the *s*-stems of nouns, but it is unknown what was the original function or meaning of the *-s-*.

This class originally contained both athematic and thematic presents. The athematic forms except in the aorist were not preserved in Greek, but were well pre-

served in Sanskrit where however the -s- was levelled out into all forms of the verb, as dvé-ś-mi, *I hate*, pl. dvi-ś-máḥ, *we hate*, dvi-ś-táḥ, *hated* : Gr. *δέει-, *δέει, *fear*. Of the thematic presents several were preserved in Greek, as Skr. rák-ś-a-ti, *he rescues*, pl. rák-ś-a-nti, *they rescue*, Gr. ἀλέξω : ἀλ-αλκ-εῖν, ἀλκ-ή; Skr. úk-ś-a-ti, *he grows*, Gr. αὔξω : Skr. ój-as-, *strength*, Lat. augēre; Skr. trá-s-a-ti, *he trembles*, Gr. τρέω from *τρεσω : τρέμω, Lat. tre-mo; ἀ(τ)έξω, δέψω beside δέφω, ἔψω, κλάω cp. κέ-κλασ-ται, ὁδάξω : δάκ-νω, ξέω cp. ξέσ-σαι, σείω cp. σέ-σεισ-ται, σπάω cp. ἔ-σπασ-ται. It should be noted that no sharp line of distinction can be drawn between primary s-verbs and denominative verbs formed from s-stems, cp. τελέω from *τελεσjω, γελάω from *γελασjω (§ 492) : τελέσ-σαι, γελάσ-σαι, beside κλάω from *κλασω : κέ-κλασ-ται.

CLASS X.

§ 469. To this class belong the verbs the present of which was originally formed by the addition of the formative suffix -sko- to the weak grade form of the base which could be either monosyllabic or dissyllabic. The presents of this type were rare in Sanskrit and the Germanic languages, but became productive in Greek and Latin. They appear in Greek both with and without reduplication, the former do not appear in Sanskrit, and Latin has only the one example *disco* from *di-dc-sco. The accent was originally on the suffix in all forms of the present, as sing. -skō, -ské-si, -ské-ti, pl. -skó-mes, -ské-t(h)e, -skó-nti. It is doubtful whether the suffix in the Ionic imperfect and aorist iterative forms like φάσκε, φεύγεσκε, φιλέεσκε, δόσκον, φύγεσκε, &c. is of the same origin, because the meaning of the suffix and the absence of the augment (§ 430) in such forms have never been satisfactorily explained.

a. Without Reduplication.

§ 470. 1. Monosyllabic heavy bases, as *φάσκω* : *φημί* (§ 454), *βόσκω* : *βώτωρ*.

2. Dissyllabic light bases, as *βάσκω*, *βάσκει*, Skr. *gáčchā-mi*, *I go*, *gáčcha-ti*, *he goes*, Indg. **g̃miskō*, **g̃mské-ti* : *βαίνω* from **βαμյω* (§ 142), Indg. **g̃mjō*, beside Goth. *qimip*, *he comes*, Indg. **g̃eme-ti*; Skr. *pṛcchá-ti*, Lat. *poscit* from **porc-scit*, Indg. **pṛk-ské-ti*, *he asks*; *ἴσκω* from **fik-skō* (§ 186) : *ἴ-οικα*, *λάσκω* from **λακ-skō* : *ἔλακον*, *μίσγω* from **μικ-skō*, with -*y*- for -*k*- after the analogy of *μίγνυμι*, *ἐμίγην*, cp. Lat. *misceo*; *πάσχω* from **παθskō* : *ἔπαθον* (§ 109).

3. Dissyllabic heavy bases, as *ἀρέσκω* : *ἥρεσα*, *γηράσκω* : *γηράω*, *θνήσκω* (Dor. *θνάσκω*), *βλάσκω*, *θρώσκω*. In presents like *εύρίσκω* : *εύρησω*, *στέρισκω* : *στερήσομαι*, *ἀλίσκομαι* : *ἀλώναι*, *ἀμβλίσκω* : *ῆμβλωσα*, the -*i*- was the weak grade form of an original long diphthong *·ei*, *·oi* (§ 458). After the analogy of such presents were formed Att. *θνήσκω*, *μι-μνήσκω* (§ 471), *θρώσκω*, Ion. *κληῆσκω*, *χρηῖσκομαι*.

b. With Reduplication.

§ 471. In the reduplicated verbs belonging to this class three sub-divisions are to be distinguished according as the reduplicated syllable contains -*r*, -*e*, or a fuller reduplication.

1. *βιβρώσκω*, *γιγνώσκω* : Lat. (*g*)*nōscō*, *διδάσκω* from **δι-δακ-skō* : Lat. *disco*, *διδράσκω*, *ἴλασκομαι* from **σι-σλα-skōμαι* : *ἴλαθι* from **σι-σλα-θι*; *κικλήσκω*, *μιμνήσκω* beside *κικλήσκω*, *μιμνήσκω* (§ 470, 3), *πιπράσκω*, *τιτύσκομαι*, *πιπίσκω*.

2. *δεδίσκομαι*, *έίσκω* from **Fε-fik-skō* beside *ἴσκω* : *ἴ-οικα*.

3. *ἀραρίσκω*, *ἀπαφίσκω*.

CLASS XI.

§ 472. To this class belong the verbs the present of which contains a dental suffix -*to*-, -*do*-, or -*dho*-. The presents of this type were rare in the parent Indg. language and

remained unproductive in the various individual languages with the exception of the *-dho-* presents in Greek. In Sanskrit, Latin and the Germanic languages the dental was generally levelled out into all forms of the verb, and occasionally also in Greek. It is sometimes difficult to determine how far the dental can be regarded as a formative verbal suffix and how far it is merely a so-called root-determinative. The *-to-* presents are rare in all the Indg. languages. In these presents the *-to-* was closely connected with the nominal suffix *-to-*, cp. Lat. *plecto*, *πλεκτός*: *πλέκω*, *πέκτω* : *πεκτός*, *ἔβλαστον* : *βλαστός*. It is doubtful what was the origin and original function of the dental in the *-do-* and *-dho-* presents. Some scholars regard it as being connected with the *-d-*, *-dh-* of the roots **dō-* in *δι-δω-μι*, and **dhē-* in *τί-θη-μι*.

*-to-*presents.

§ 473. Att. *ἀνύτω* : *ἀνῦμι*; Att. *ἀρύτω* : *ἀρύω*; *πέκτω*, Lat. *pecto*, cp. OE. *feohtan*, *to fight* : *pékw*; Lat. *plecto* : *πλέκω*. In forms like *ἔβλαστον* : *βλαστάνω*, *ῆμαρτον* : *ἀμαρτάνω* the dental is not a present suffix but belongs to all forms of the verb. *τίκτω* is from older **τιτκω* (§ 457). All or nearly all the other *-to-*presents in Greek are of a different origin, as in *ἀστράπτω* from **ἀστραπή* (§ 129, 1) : *ἀστραπή*; and similarly *δάπτω* : *δαπάνη*, *κλέπτω* : Lat. *clepo*, Goth. *hlifa*, *I steal*; *χαλέπτω* : *χαλεπός*; *κόπτω*, *σκάπτω*, *τύπτω*, and many others. These and similar presents, where the *-πτ-* was regularly developed from older *-πj-* (§ 129, 1), gave rise to numerous new formations. After the analogy of the future and aorist in verbs like *τύψω*, *ἔτυψα* : *τύπτω* from **τυπjω*, new presents in *-πτ-* were formed to stems ending in *-β* and *-φ*, as *καλύπτω* : *καλύψω*, *ἐκάλυψα*, cp. *καλύβη*; *βάπτω* : *βάψω*, *ἔβαψα*, cp. *ἔβάφην*; and similarly *ἄπτω*, *βλάπτω*, *δρύπτω*, *έρέπτω*, cp. *ἔρέψω*, *θάπτω*, *κρύπτω*, *κύπτω*, &c. And in like manner were

formed new presents to stems originally ending in a velar guttural (§§ 202, 205), as *πέπτω* : *πέψω*, *ἐπεψα*, beside the regular form *πέσσω*, Att. *πέττω* from Indg. **peqjō*, cp. Lat. *coquo*, Skr. *pácāmi*, *I cook*; *νίπτω* : *νίψω*, *ἐνιψα*, beside the regular form *νίξω* from Indg. **nigjō*.

-do-presents.

§ 474. *ἀλδομαι*, *ἀλδαίνω* : *ἄν-αλ-τος*, Lat. *alo*; *ἔλδομαι* from **fελδομαι* : Lat. *vel-le*; *μέλδομαι* : *μαλακός*.

-dho-presents.

§ 475. *ἀλήθω* : *ἀλέω*, *ἀλθομαι*, *ἀλθαίνω* : *ἄν-αλ-τος*, Lat. *alo*; *ἀλκαθεῖν* : *ἄλκω*, *ἀχθομαι* : *ἄχνυμαι*, *βαρύθω* : *βαρύς*, *βρίθω* : *βρι-αρός*, *γήθομαι*, Dor. *γάθομαι* from **γαθαθομαι* : *γαίω* from **γαθjω*, cp. Lat. *gaudeo* from **gāvideō*; *ἐμέθω* : *ἐμέω*, *ἐσθω*, *ἐσθίω* : *ἔδω*, Lat. *edo*; *aor. ἐσχεθον* : *ἐσχον*, *θαλέθω* : *θάλλω*, *κνήθω* : *κνάω*, *πελάθω* : *πέλας*, *πλήθω* : *πίμπλημι*, *πύθω* : Skr. *pūyati*, *he stinks*, *πύον*; *φλεγέθω* : *φλέγω*, *μινύθω* : Skr. *mi-nō-mi*, *I lessen*, Lat. *minuo*; *φθινύθω* : Skr. *kṣi-nō-mi*, *I destroy*.

CLASS XII.

§ 476. To this class belong the various types of j-presents which from the point of view of Greek can be conveniently divided into the so-called primary verbs, the denominative verbs, and the causative together with the iterative verbs. In the so-called primary verbs two originally distinct types of presents fell together in Greek, viz. the thematic jo-presents and the athematic ī-presents (§ 481). Before reading the account of the history of the j-presents in Greek, the student should consult §§ 127–30, because what is stated there about j will not be repeated in the following paragraphs.

I. PRIMARY VERBS.

a. Thematic Presents.

§ 477. The thematic presents were formed by adding -jo-, -je- direct to the root-syllable which could have either the strong or the weak grade of ablaut, as *λεύσσω* from *λευκήω; *πέσσω* = Indg. *péqjō: Skr. pácyatē = Indg. *péqjetai, *he cooks*; Skr. pásyati, *he sees*: Lat. specio; beside *βαίνω* from *βανjω, Lat. venio (§ 142), Indg. *gmjō; *σχίζω* from *σχιδjω: Goth. skáidan, *to divide*. The original inflexion of the present was: sing. -jō, -je-si, -je-ti, pl. -jo-mes, -je-t(h)e, -jo-nti, and the thematic vowel had or had not the accent according as the root-syllable contained the weak or the strong grade of ablaut, as *gmjéti, *he goes*, beside *péqjeti, *he cooks*. But the accent in presents of the type *gmjéti probably became shifted on to the root-syllable already in the prim. Indg. period, cp. Skr. kúpjati, *he is angry*, Lat. cupio; dívyati, *he plays*; hřsyati, *he rejoices*, beside pásyati, *he sees*. The oldest stratum of both types was the denominative presents formed from monosyllabic root-nouns. A distinction in the accent between them and the ordinary denominatives thus arose insomuch as all presents of the former type came to have the accent on the root-syllable, whereas the latter type had it on the thematic vowel -jó-, -jé-. Greek, Sanskrit, and the Baltic-Slavonic languages regularly preserved the primary -jo-presents, but in Latin and the Germanic languages they became mixed up with the originally athematic ī-presents (§ 481).

§ 478. The root-syllable of the primary jo-presents could end in a vowel or in a consonant, as δράω, δρῶ from *δρᾶjω, Att. ξῶ, κνῶ, χρῶ from *ξηjω, *κνηjω, *χρηjω; δέω from *δεjω; φύω, Lesb. φυῖω from *φυjω; πτῦω from Indg. *spjūjō, Lith. spiáuju, *I spit*.

δαίομαι, *κναίω* from **δαιγομαι*, **κναιγω*. *γαίω*, *δαίω*, *κλαίω* from **γαργω*, **δαργω*, **κλαργω*.

ἄλλομαι from **σαλγομαι*: Lat. *salio*; *βάλλω* from **βαλγω*, and similarly *θάλλω*, *πάλλω*, *σκάλλω*, *σφάλλω*, *μέλλω*, *στέλλω*, *τίλλω*, *σκύλλω*, &c.

σπαίρω from **σπαργω*, Indg. **sprijō*: Lith. *spiriù*, *I push with the foot*, and similarly *σκαίρω*, Dor. *φθαίρω* beside Att. *φθείρω*, *ἀγείρω*, *αἴρω* from **farejω*, *ἀείρω*, Lesb. *ἀέρρω* from **ἀφεργω*, *δείρω*, Lesb. *δέρρω*, *κείρω*, Lesb. *κέρρω*, *μείρομαι*, *πείρω*, *σπείρω*, *φθείρω*, Lesb. *φθέρρω*, *κύρω*, *μύρομαι*, *φύρω*.

βαίνω from **βανγω*, Indg. **gmjō* (§ 65), *φαίνω* from **φανγω*, and similarly *δραίνω*, *καίνω*, *κραίνω*, Lesb. *κταίνω* beside Att. *κτείνω*, Lesb. *κτέννω*, *σαίνω*, *χραίνω*.

βράστω, Att. *βράττω* from **βρατγω*, and similarly *λίστομαι*, *πάσσω*. *βλύξω* from **βλυνδγω*, and similarly *κνίξω*, *σχάξω*, *χάζομαι*, &c.

δράστω, Att. *δράττω* from **δρακγω*, and similarly *θράσσω*, *τάσσω*, *φράστω*, *λεύσσω*, *πέσσω* (Indg. **péqjō*), *πράσσω*, *πλήγσω*, *φρίσσω*, *ἀμύσσω*, *δρύσσω*, *πτύσσω*.

ἄξομαι, *βάξω* from **ἄγγομαι*, **βαγγω*, and similarly *κράξω*, *λάξομαι*, *σκάξω*, *σφάξω*, *ρέξω*, *βρίξω*, *κρίξω*, *λίξω*, *νίξω* (Indg. **niqjō*), *στίξω*, *τρίξω*, *μύξω*, *τρύξω*, &c.

ναίω from **νασγω* : *νάσ-σαι*, and similarly *μαίομαι*, *κείω*.

On the presents ending in -*πτω* from -*πγω* see §§ 129, 1, 473.

§ 479. The -*jo-* in primary verbs was sometimes a secondary suffix added to other present-formative elements, as *κλίνω*, Lesb. *κλίννω*, from **κλινγω* : *κλίσις*, *κρίνω* : *κρίσις*, *πλύνω* : *πέπλυται*, *δτρύνω*. *κλάξω* from **κλαγγω* : Lat. *clango*, *πλάξω* from **πλαγγω* : Lat. *plango*, *λύξω* from **λυγγω* (§ 480). *κῦδαίνω* from **κυδαγγω* : *κῦδάνω*, and similarly *οίδαίνω*, *δλισθαίνω* (§ 467, note).

§ 480. The reduplicated presents of this division generally have a fuller reduplication, and rarely -*i-* in the reduplicated syllable, as *νη-νέω*, *μαι-μάω*. *παι-πάλλω*. *γαρ-γάρω*, *καρ-*

καίρω, μαρ-μαίρω, μορ-μύρω, πορ-φύρω. *βαμ-βαίνω, παμ-φαίνω.* *ἀίσσω,* Att. *ἄττω,* from **Fai-Fik-jw*, *παι-φάσσω.* *ἰάλλω* from **σι-σαλ-jw* (cp. § 213, 1) : *ἄλλομαι*, Lat. *salio*, *τι-ταίνω, λι-λαίομαι* from **λι-λασ-jo-μαι*.

b. Athematic Presents.

§ 481. To this division belong the primary presents which were formed from dissyllabic heavy bases containing the long diphthong *-ēi-* in the second syllable (cp. § 458). The presents of this type originally belonged to the athematic conjugation. In the singular the accent was on the first syllable of the base and in the dual and plural on the personal endings, as base **menēi-*, *think*, sing. **ménī-mi*, **ménī-si*, **ménī-ti*, pl. **ménī-més*, **ménī-t(h)é*, **ménī-énti*. The original athematic inflexion was not preserved in all forms of the present in any of the Indg. languages in historic times. Judging from the Baltic-Slavonic languages (see below) it is probable that the first person singular went over into the jo-presents already in the parent Indg. language. In Greek all the presents of this type went entirely over into the thematic conjugation and thus fell together with the jo-presents. And the weak stem-form of the dual and plural became generalized, as *μαίνομαι* from **μανjόμαι*, older **ménjomai* : *ἐμάνην, χαίρω* : *ἐχάρην, ἔζομαι* from **σεδjόμαι* : Lat. *sedē-re*, *δέω* from **όδjω* : *δέήσω* for **όδησω*. Also in Sanskrit most of the presents of this type went over into the thematic conjugation, whereas in Latin and the Germanic languages the two types of presents became mixed, cp. Lat. *capio* from **capjō*, *capis*, *capit*, *capimus*, *capitis*, *capiunt* from **capjont*, beside *farcio* from **farcjō*, *farcis*, *farcit* from older **farcít*, *farcímus*, *farcítis*, *farcíunt* from **farcjont*, where the first person singular and the third person plural belong to the thematic conjugation and all the other forms to the athematic. The original distinction

between the inflexion of the two types of presents was best preserved in the Baltic-Slavonic languages, cp. O.Slav. sing. *mǐnja*, *I think*, *mǐni-ši*, *mǐni-tū*, pl. *mǐni-mǔ*, *mǐni-te*, *mǐn-ętū*, beside sing. *borja*, *I fight*, *borje-ši*, *borje-tū*, pl. *borje-mǔ*, *borje-te*, *borjatū*. Whether a present originally belonged to the athematic or to the *jo*-presents can generally be determined by the fact that the former type of present usually has an *ē*- or an *i*-stem beside it in the non-present forms, cp. *μαίνομαι* : *ἐμάνην*, *μεμανηώς*, *μεμάνημαι*, *μανία*; *χαίρω* : *ἐχάρην*, *χάρις*.

2. DENOMINATIVE VERBS.

§ 482. The formation of the denominative presents was in principle the same as that of the so-called primary *jo*-presents (§ 478). Apart from the position of the accent in the two types of presents they were identical in formation. In the denominative presents the accent was originally on the *jó*-, *jé*-, thus sing. *jó*-, *jé-si*, *jé-ti*, pl. *jó-mes*, *jé-t(h)e*, *jó-nti*. This system of accentuation was preserved in Sanskrit, as sing. *dēva-yá-mi*, *I cultivate the gods, am pious*, *dēva-yá-si*, *dēva-yá-ti*, pl. *dēva-yá-mah*, *dēva-yá-tha*, *dēva-yá-nti*, formed from *dēvá*, *god*; but in prim. Greek the accent was shifted from the *jó*-, *jé*- on to the stem, cp. *φιλέω*, *τιμάω*, *μηνίω*, *φιτύω*, *τεκταίνω*, *τελέω*, *ἔλπίζω*, from prim. Gr. **φιλεյώ* : *φίλος*, **τιμᾶγώ* : *τιμᾶ*, -ή, **μηνιγώ* : *μῆνις*, **φιτυγώ* : *φῖτν*, **τεκτανγώ* (where *-an-* = Indg. *-n-, the weak grade of *-aw*, *-ov*) : *τέκτων*, **τελεσγώ* : *τέλος*, *τέλεσ-*, **ἔλπιδγώ* : *ἔλπιδ-*. By comparing the various languages with one another it can be shown that denominative presents were capable of being formed from all kinds of nominal stems already in the parent Indg. language, and that such presents were formed by the addition of *jó*-, *jé*- to the bare stem. The denominative verbs can be conveniently divided into two great groups according as they were formed from stems ending in a vowel or a consonant.

a. Vocalic Stems.

§ 483. The formation of denominative verbs in *-ājō*, *-ejō*, *-ijō*, and *-ujō*, from *ā-*, *o-*, *i-*, and *u*-stems, was common in the parent Indg. language, and making allowance for the special sound-laws of the individual languages, this type of verb was preserved and often became very productive in the oldest period of all the languages. The Greek verbs in *-όω* (see below), formed from the *o*-form of *o*-stems, was a special Greek formation which does not occur in any of the other languages. Before reading the following paragraphs dealing with the contract verbs the student should consult §§ 79–80 on vowel contraction. In Greek as also in other Indg. languages the denominative verbs, formed from *ā-*, *o-*, *i-*, and *u*-stems, have a long vowel in the non-present forms and in the nomina derived from them, as *τīμήσω*, *έτίμησα*, *τīμητός*, *τīμησις* : *τīμάω*, cp. Lat. *plantārem*, *plantātus* : *planto*; *φīλήσω*, *έφīλησα*, *φīλητός* : *φīλέω*, cp. Lat. *albērem* : *albeo*; *έδηρīσάμην*, *ἀδήρīτος* : *δηρīομai*, cp. Lat. *fīnīrem*, *fīnītus* : *fīnio*; *ἀδάκρūτος* : *δακρύω*, cp. Lat. *statūtus* : *statuo*; *μīσθώσω*, *έμīσθωσα*, *μīσθωτός* : *μīσθώω*, cp. Lat. *aegrō-tus*. This development of the verbal system took place in prehistoric Greek partly through the influence of the verbs in Class IV (§§ 458–9) and partly through the influence of the verbal adjectives in *-ητος*, *-ωτος*, *-ῖτος*, *-ῦτος*, which themselves were new formations formed after the analogy of the denominative and verbal adjectives in *-ἄτος*. In some dialects the long vowel in the non-present forms was levelled out into the present. This was especially the case in Boeot. Lesb. and Delph., and also with the verbs in *-ίω*, *-ύω* for *-ἴω*, *-ύω* in Attic and Ionic. In the Boeot. Lesb. Thess. Arcad. and Cyprian dialects the denominative presents in *-άω*, *-έω*, *-όω* often went over into the athematic conjugation after the analogy of the original athematic presents (§ 483, note).

§ 484. The verbs in *-άω* were originally formed from *ā*-stems, as *τίμάω*, older **τιμᾶjω*, Indg. *-ājō* : *τιμά*, *-ή*, cp. Skr. *pṛtanā-yā-mi*, *I fight*, *pṛtanā-yá-ti*, *he fights* : *pṛtanā-*, *fight, battle*; Lat. *planto*, older **plantājō* : *planta*. Some verbs have a long vowel in the root-syllable as compared with the vowel in the corresponding nouns, as *νωμάω* : *νομή*, *στρωφάω* : *στροφή*, *πωτάμαι* : *ποτή*, &c. *ā*-stems with collective and abstract meaning existed in the parent language by the side of *o*-stems, whence verbs like *ἀντιάω* : *ἀντίos*, *ἀτίμάω* : *ἄτιμos*, *γοάω* : *γόos*, *ἱεράμαι* : *ἱερόs*, *λοχάω* : *λόchos*, *μωμάμαι* : *μώmos*, *φοιβάω* : *φοιβos*. The short *-a* in *τίμάω*, &c. was due to the analogy of the short vowel of the verbs in *-έω*, *-ώ*, *-ίω*, *-ύω* and partly also to verbs formed from *jā*-stems, as *τολμάω* : *τόλμa*. Cp. §§ 73–4.

§ 485. In the parent Indg. language the denominatives in *-ejō* (Gr. *-έω*, Skr. *-ayā-*, Lat. *-eo*) were formed from the *e*-form of the *o*-stems, cp. Lat. *albeo* : *albus*, *lenteo* : *lentus*, Skr. *dēva-yā-mi*, *I am pious*, *amitra-yá-mi*, *I am hostile*, 3. pers. sing. *dēva-yá-ti*, *amitra-yá-ti* : *dēvā-*, *god*, *ámitra-*, *enemy*, Gr. *φιλέω*, *ἀριθμέω*, from **φιλεjω*, **ἀριθμejω* : *φίλos*, *ἀριθμόs*; *κοιρανέω* : *κοίρανos*, *οίκέω* : *οἶkos*, &c. Through the shifting of the accent in prim. Greek the denominatives in *-έω* fell together with the causative and iterative verbs *φοβέω*, *τροπέω*, &c. from Indg. *-éjō* (§ 497). Beside the more general form in *-ejō* there was also a form in *-jō* with omission of the final *-e* of the stem. This was probably due to the fact that numerous vocalic and consonantal stems existed side by side in the parent Indg. language, cp. Skr. *turaṇ-yá-mi*, *I hasten*, *adhvar-yá-mi*, *I sacrifice*, 3. pers. sing. *turaṇ-yá-ti*, *adhvar-yá-ti* : *turaṇá-*, *hasty, quick*, *adhvará-*, *sacrifice*; Gr. *ἀγγέλλω* from **άγγελjω* : *ἄγγελos*, and similarly *αιόλλω*, *δαιόλλω*, *καμπύλλω*, *ποικύλλω*, &c.; *φαείνω* from **φαεσνjω* : *φαεινόs* from **φαfeσnos*, *μειλίσσω* from **μειλιχjω* : *μείλιχos*, *χαλέπτω* from **χαλεπjω* (§§ 129, I, 478) : *χαλεπόs*.

§ 486. The denominatives in *-δω*, which are generally factitive in meaning, were a special Greek new formation and came to be formed from the o-form of o-stems already in the prehistoric period of the language, as *δουλώ* : *δοῦλος*, *δηλώ* : *δῆλος*, *μισθώ* : *μισθός*, *νεό* : *νέος*, *πολεμώ* : *πολεμέω* : *πόλεμος*, *χρῆσθω* : *χρῆστός*, &c. This type of present became productive and was extended to other than o-stems, as *ζημιώ* : *ζημία*, *γεφῆρω* : *γέφερα*, *πλατώ* : *πλατύς*, *δρυτήρω* : *δρυτή*.

§ 487. *κονίω* from **κονιγω* (Indg. *-iŋō*, Skr. *-ङ्याः*) : *κόνις*, *μητίομαι*, Lat. *mētior* : *μῆτις*, and similarly *δηρίομαι*, *μαστίω*, *μηνίω*, &c., cp. Skr. *jani-yá-ti*, *he seeks a wife* : *jáni-*, *wife*; *sakhi-yá-ti*, *he desires friendship* : *sákhi-*, *friend*; Lat. *finio*, *grandio*, *lēnīo* : *finis*, *grandis*, *lēnis*.

§ 488. *δακρύω* from **δακρυγω* (Indg. *-ujō*, Skr. *-ृयाः*) : *δάκρυ*, and similarly *ἀχλύω*, *γηρύω*, *ἴθύω*, *μεθύω*, *φιτύω*, &c., cp. Skr. *gātu-yá-ti*, *he sets in motion* : *gātū-*, *motion*; *śatrū-yá-ti*, *he treats as an enemy* : *śátru-*, *enemy*; Lat. *acuo*, *statuo* : *acus*, *status*.

§ 489. The denominatives in *-είω*, prim. Gr. *-ηfjō*, were formed from the stem of nouns of the type of *βασιλεύς* from **βασιλης* : **βασιλη-* (§ 338). The *-ηfjō* would regularly have become *-είω* (through the intermediate stages *-ηfω*, *-εifω*) which is found in the dialect of Elis. In *βασιλεύω* for **βασιλείω* the *-εύ-* was introduced into the present after the analogy of the other tenses, and it may also in part be due to the influence of the nominative singular of the corresponding noun, and similarly *ἀριστεύω*, *ἱερεύω*, *ἰππεύω*, *νομεύω*, *πομπεύω*, *τορεύω*, *φονεύω*, *χαλκεύω*, &c. This type of present became productive in the oldest period of the language and was extended to other than *-εύ*-stems, as *θηρεύω* : *θήρα*, *βουλεύω* : *βούλή*, *ἀγορεύω* : *ἀγορά*, *οίνοχοεύω* : *οίνοχός*, *μαντεύομαι* : *μάντις*, *δραγμεύω* : *δράγμα*, *ἀληθεύω* : *ἀληθής*.

b. Consonantal Stems.

§ 490. From **n**-stems, as ὀνομαίνω from *ὄνομαντῳ (= Indg. -ῆγό) : ὄνομα, ποιμαίνω from *ποιμαντῷ : ποιμήν, and similarly εὐφραίνω : εὐφρῶν, κῦμαίνω : κῦμα, μελαίνω : μέλαν-, πτιάνω : πτῶν, σπερμαίνω : σπέρμα, τέκταίνω : τέκτων, &c. This type of present became productive in the oldest period of the language and after the analogy of it were formed a large number of verbs from other than **n**-stems. These new formations generally had a factitive meaning, as βασκαίνω : βάσκανος, κερδαίνω : κέρδος, and similarly λειαίνω, λευκαίνω, λιταίνω, πικραίνω, &c.; γλυκαίνω : γλυκύς. After the analogy of the verbs in -άίνω were formed those in -άνω from **u**-stems, as ἀρτάνω : ἀρτύς, and similarly βαρτάνω, βραδάνω, ἥδτάνω, θρασάνω, ιθύτάνω. And then further after the analogy of these were formed new denominatives like αἰσχύνω : αἰσχός, κακύνω : κακός.

§ 491. From **r**-stems, as τεκμαίρω from *τεκμαρյῷ (= Indg. -ῆγό) : τέκμαρ. Analogical formations from other than **r**-stems were γεγαίρω : γεγαρός, ἔχθαίρω : ἔχθρός, καθαίρω : καθαρός, &c. μαρτύρομαι from *μαρτυρյόμαι : μάρτυρ-, and similarly κινύρομαι : κινυρός, μινύρομαι : μινυρός.

§ 492. From **s**-stems, as τελέω, Hom. τελέιώ, Att. τελῶ from *τελεστῷ : τέλος, stem τέλεσ-, cp. Skr. *apas-yá-mi*, *I am active*, *apas-yá-ti*, *he is active* : ápas-, Lat. opus, work; Goth. *riqizjan*, *to become dark* : *riqis*, darkness; and similarly ἀκέομαι : ἄκος, ἀνθέω : ἀνθος, πενθέω : πένθος, νεικέω : νεῖκος, &c. αἰδέομαι from *αἰδεσյόμαι : αἰδεσ- : αἰδώς. Forms like ιδρώω from *σιδροσյῷ, ρῆγω, Hom. γελώω, ιδρώω were formed direct from the nominative ιδρός, ρῆγος, ιδρώς, γέλως.

§ 493. From dental stems, as αἰμάσσω from *αίματῃ : αἴματ-, βλίστω, βλίσσω (§ 129, 6) : μέλιτ-, κορύσσω from *κορυθյῷ : κόρυθ-. ἐλπίζω from *ἐλπιδյῷ : ἐλπίδ-, and similarly ὀπίζομαι, λιθάζω, μιγάζομαι, &c.

§ 494. From guttural stems, as *κηρύσσω* from **κηρυκήω* : *κῆρυξ*, -*ῦκος*, *βῆσσω* from **βηχήω* : *βῆξ*, *βηχός*, *θωρήσσω* : *θώραξ*, -*ᾶκος*, &c. *ἀρπάξω* from **ἄρπαγήω* : *ἄρπαξ*, -*αγος*, and similarly *μαστίξω*, *σαλπίξω* from **σαλπιγγήω* (§ 156).

§ 495. The denominatives in -*άξω*, -*ίζω* from -*αδյω*, -*αγյω*, -*ιδյω*, -*ιγյω* became productive and gave rise to a large number of analogical formations from all kinds of stems, as *ἀγαπάξω* : *ἀγαπάω*, *πειράξω* : *πειράω*, *δικάξω* : *δίκη*, *καναχίζω* : *καναχή*, *δοκιμάξω* : *δόκιμος*, *ἡσυχάξω* : *ἡσυχος*, *δειπνίζω* : *δεῖπνον*, *ἀκοντίζω* : *ἀκων*, *μακαρίζω* : *μάκαρ*, *αἰματίζω* : *αἷμα*.

§ 496. The formation of the denominatives in -*ώσσω*, -*ώττω* is uncertain insomuch as it cannot be determined whether it originally arose from dental or guttural stems. It is possible that this type of verb started out from *ἀμβλυώσσω* from **ἀμβλυωκήω* : *ἀμβλυωπός*, *τυφλώσσω* : *τυφλάψ*, and that they were formed before the velar guttural became π in -*ωπ-*, cp. the parallel forms Skr. *akṣí*, Gr. *ὅσσε* from **όκχε*, Indg. **oqī*, both eyes, Lat. *oc

·
ulus*, beside *ὄφομαι*, *όπτέον*. The -*ώσσω* in these verbs may have become productive and extended by analogy to other than guttural stems, as *λιμώσσω* : *λιμός*, *ὄνειρώσσω* : *ὄνειρος*, *ὑγρώσσω* : *ὑγρός*, *ύπνώσσω* : *ύπνος*, &c.

3. CAUSATIVE AND ITERATIVE VERBS.

§ 497. Causative and iterative verbs were common in the parent Indg. language and were also preserved in the oldest period of all the separate languages. This type of present was formed by the addition of the formative suffix -*éjo*-, -*éje*- to the root-syllable which contained the o grade of ablaut (= Gr. o, Lat. o, Goth. a, Skr. ā), as Indg. sing. **sod-éjō*, *I cause to sit, set*, **sod-éje-si*, **sod-éje-ti*, pl. **sod-éjo-mes*, **sod-éje-t(h)e*, **sod-éjo-nti* = Skr. *sād-áyā·mi*, *sād-áya·si*, *sād-áya·ti*, *sād-áyā·mah*, *sād-áya·tha*, *sād-áya·nti*, Goth. *sat·ja*, *sat·jis*, *sat·jip*, *sat·jam*, *sat·jib*, *sat-*

jand : root *sed-, sit; φοβέω from *φοβεῖω : φέβομαι, and similarly σοβέω : σέβομαι, cp. Lat. noceo : neco, moneo : memini; Engl. fell, set : fall, sit.

ποτέομαι from *ποτεῖομαι, Skr. pāt·áyā·mi : पेतोमाई, Skr. pātā·mi, I fly, and similarly βρομέω : βρέμω, ὄχέομαι : Lat. veho, σκοπέω : σκέπτομαι, στροφέω : στρέφω, τρομέω : τρέμω, τροπέω : τρέπω, φοβέομαι : φέβομαι, φορέω : φέρω, &c.

After the shifting of the accent in the denominative presents formed from o-stems, as φιλέω from *φιλεῖω, older -εյώ (§ 482) verbs like φοβέω, φορέω came to be regarded as being formed from the nouns φόβος, φόρος, and then after the analogy of φιλέω : φιλήσω, ἐφίλησα, φιλητός, to φορέω were formed φορήσω, ἐφόρησα, φορητός for *φοριτός where -ιτός was the regular Indg. ending of the verbal adjective belonging to this type of present, cp. Lat. monitus : moneo, Goth. satiþs : satjan, to set, Skr. vartitáh : vart·áyā·mi, I turn.

THE FUTURE.

§ 498. It is doubtful whether the parent Indg. language had special forms which were exclusively used to express future meaning. By comparing together the oldest periods of the different languages we are forced to the conclusion that it must have been expressed in various ways. In Sanskrit and Lithuanian the future was formed by means of the formative element -sjó-, -sjé- which was an extension of the -s- element occurring in Class IX of the presents (§ 468). This -sjo- future belonged to the thematic conjugation and was inflected like a present, as Skr. dā-syá·mi (Lith. dū-siu), I shall give, dā-syá·si, dā-syá·ti, pl. dā-syá·mah, dā-syá·tha, dā-syá·nti = Indg. *dō-sjó-, *dō-sjé-si, *dō-sjé-ti, pl. *dō-sjó-mes, *dō-sjé-t(h)e, *dō-sjó-nti. This formation may also exist in Greek in the future formed from bases or stems ending in an explosive, as δείξω, Skr.

dēk-ṣyá-mi, Indg. *deik-sjō, but it is far more probable that such is not the case, because the future formed from the other bases or stems cannot be explained as being of this origin.

The present with momentary meaning was also originally used with a future meaning, and a few such forms also occur in Greek, as δήω, ἐμί, νέομαι (§ 424). This mode of expressing the future became productive in the old Germanic and Slavonic languages. And in like manner the subjunctive of a presential or second aorist stem was also used with a future meaning, as ἔδομαι (Skr. pres. indic. ád-mi, *I eat*), πίομαι, χέω, Hom. βείομαι, cp. also Lat. ero = ἔω, ὁ, Indg. *éso.

§ 499. The ordinary Greek future was originally the subjunctive of the s-aorist which came to be used for the future, cp. also the similar forms in Lat. **capso**, **dixo**, **faxo**, &c. This subjunctive of the s-aorist had the same root-vowel as the present indicative. It belonged to the thematic conjugation and was inflected like a present, as sing. -sō, -se-si, -se-ti, pl. -so-mes, -se-t(h)e, -so-nti, whereas the indicative of the s-aorist belonged to the athematic conjugation (§ 507). The Greek future can be conveniently divided into two great categories according as it appears with or without the medial -σ-. The medial -σ- regularly remained in bases or stems ending in an explosive, as λείψω, ὅψομαι, πέψω, τέρψω; βλάψω, βλάψομαι, τύψω; πλέξω; ἀξω, ξεύξω, πράξω, φεύξομαι; φράσω: φράξω from *φραδʒω, σπείσω: σπένδω, πείσω: πείθω; γλύψω, γράψω, γράψομαι, θρέψω, θρέψομαι: τρέφω; τεύξομαι; διδάξω, ποιφύξω; ἀρπάξω, κηρύξω, σαλπίγξω, &c. After the analogy of these and similar forms the medial -σ- was restored in all verbs the base or stem of which ended in a long vowel or diphthong (see § 213, 2), as θήσω, δάσω (Hom. also διδώσω), στήσω; λύσω; ἀμαρτήσομαι, βοσκήσω, βουλήσομαι, γενήσομαι, εἰδήσω, εὐδήσω, μανήσομαι, μνήσω, ὀζήσω, ποιήσω, σχήσω,

τυπτήσω, χαιρήσω, γνώσομαι; τιμήσω, φιλήσω, δηλώσω; *τείσω, πλεύσομαι, οἰσω.* In the primary verbs the long vowel had its origin in monosyllabic (§§ 454-5) and dis-syllabic (§ 458) heavy bases.

The medial -σ- generally disappeared (§ 213, 2) in the future formed from dissyllabic heavy bases with a short vowel in the second syllable, as ἐλάω, *κρεμάω, ὁμόομαι,* *καλέω, ὀλέω, βαλέω, γαμέω, τενέω,* Hom. *πεσέομαι* from **πετεσομαι* = Att. ἐλῶ, *κρεμῶ, ὁμοῦμαι, καλῶ, ὀλῶ, βαλῶ,* *γαμῶ, τενῶ, πεσοῦμαι* (§ 80), and similarly *στελέω, στελέομαι, νεμέω, τεμέω, θενέω, μενέω, φανέω, φθερέω,* &c. The -σ- was sometimes restored again, especially in epic Greek, as *δαμάσω, ἐλάσω, κρεμάσω, ὀλέσω; κέλσω, ὄρσω, φθέρσω,* &c. (cp. §§ 212, 3, 217).

After the analogy of forms like *καλέω, τενέω, φθερέω* were formed futures to denominative verbs with stems ending in a nasal, liquid, dental or -s, and to verbs with a nasal suffix in the present, as Ion. *ούνομανέω* : *ὄνομαίνω,* *ἀγγελέω* : *ἀγγέλλω, τεκμαρέομαι* : *τεκμαίρομαι, δικάω, δικῶ* beside *δικάσ(σ)ω* : *δικάξω* from **δικαδήω, κομιῶ* beside *κομίσ(σ)ω* : *κομίζω* from **κομιδήω, τελέω, τελῶ* beside Hom. *τελέσσω* : *τελέω* from **τελεσήω; κλινέω* : *κλίνω* from **κλινήω, κρινέω* : *κρίνω, Hom. ἀνύω, τανύω* beside *ἀνύσω, τανύσω.*

§ 500. The so-called Doric future, which also occurs in a few Attic verbs, was a new formation and arose from the contamination of the futures in -σω with those in -έω from -έσω, as *δειξέω, ἴδησω* : Att. *δείξω, εἰδήσω, νευσοῦμαι* : *νέω, πλευσοῦμαι* : *πλέω, πνευσοῦμαι* : *πνέω*, also Att. *κλαυσοῦμαι* : *κλαίω, φευξοῦμαι* beside *φεύξομαι, χεσοῦμαι* : *χέξω.*

§ 501. Special Greek new formations were the futures formed from the perfect and from the passive aorists in -ην (§ 506), -θην (§ 514). The futures formed from the perfect active are rare, but those formed from the perfect middle are common, as Att. *ἔστηξω* : *ἔστηκα, τέθνηξω* : *τέθνηκα.*

γεγράψομαι, *λελείψομαι*, *μεμνήσομαι*, *τετρίψομαι*, &c. This formation came to be regarded as a reduplicated future and then futures like *δεδήσομαι*, *λελύσομαι*, *τετεύξομαι* were formed direct from the simple future *δήσω*, *λύσω*, *τεύξω*. Examples of futures formed from the passive aorists in -ην, -θην are *φανήσομαι* : *ἐφάνην*, *σβήσομαι* : *ἐσβην*, and similarly *βλαβήσομαι*, *γραφήσομαι*, *μανήσομαι*, *σταλήσομαι*, *στραφήσομαι*, &c.; *δοθήσομαι* : *ἔδόθην*, *τιμηθήσομαι* : *ἔτιμήθην*, and similarly *κλιθήσομαι*, *λυθήσομαι*, *πεισθήσομαι*, *ταθήσομαι*, *φιληθήσομαι*, *δηλωθήσομαι*, &c. It should be noted that the future in -θησομαι does not occur in Homer and that in Doric both types of futures have active personal endings, as *ἀναγραφησεῖ*, *ἐπιμεληθησεῦντι*= Att. *ἀναγραφήσεται*, *ἐπιμεληθήσονται*.

THE AORIST.

§ 502. The parent Indg. language had two kinds of aorists, the root-aorist, also called the strong or second aorist, and the s-aorist. Although there was doubtless originally a difference in meaning and function between the root- and the s-aorist, the difference had disappeared before the parent language became differentiated into the separate languages. These two kinds of aorists were preserved in Greek, Aryan and the Slavonic languages, but in the other languages they either disappeared entirely or came to be used for other tenses. The aorist in -θην (§ 514) was a special Greek formation which does not occur in the other languages.

1. THE ROOT- OR STRONG AORIST.

§ 503. The strong aorist has for the most part been already dealt with in the formation of the present with which it is morphologically closely related, but even at the risk of repetition it is advisable to treat it here in a con-

nected manner. In the dissyllabic bases the only distinction between the base of the aorist and of the present was that caused by the original difference in the position of the accent and the consequent difference in the ablaut-grade, cp. *λείπε-* : *λιπέ-*, Indg. **lēiq(e)-* : **liqē-*, in *λείπω* : *λιπέν*; *πέτα-* : *πτά-*, *πτή-*, Indg. **pēta-* : **ptā-*, in *πέταμαι* : *πτῆμαι*, Dor. *ἔπταν* (§ 458). On the other hand it is not always possible to draw a hard and fast line between the formation of the aorist and the imperfect in Greek, cp. aor. *ἔβην*, *ἔστην*, *ἔδρακον* beside impf. *ἔφην* : *φημί*, *ἔγραφον* (and similarly with other aorist-presents, § 458). *ἔτεκον*, *ἔγενόμην* were properly the imperfect of the lost verbs **τέκω*, **γένομαι*, but they came to be regarded as the aorist of *τίκτω* and *γίγνομαι*. In the strong aorist we have to distinguish three types :—

a. Monosyllabic heavy Ablaut-bases (§§ 454–5).

§ 504. In the aorists of this type the root-syllable had the strong grade of ablaut in the active singular, but the weak grade in the dual, plural and the whole of the middle, as **ἔδων*, **ἔθην*, *ἔστην*, Dor. *ἔσταν* : pl. *ἔδομεν*, *ἔθεμεν*, **ἔσταμεν* = Skr. *ádām*, *ádhām*, *ásthām*, pl. *ádāma*, *ádhāma*, *ásthāma* (for **ádima*, **ádhima*, **ásthima*) with *-ā-* levelled out from the singular, and similarly *ἔστημεν* for **ἔσταμεν*. The regular form with *-i-* occurs in the middle, as *ádita* = *ἔδοτο*. The Greek third person plural *ἔδοσαν*, *ἔθεσαν*, *ἔστησαν* had the ending *-σαν* from the s-aorist (§ 507), and similarly *ἔδυσαν* : *δείκνυμι*. *ἔδωκα*, *ἔθηκα* with the same *-κα* which occurs in the *κ*-perfect (§ 520) were used for the sing. **ἔδων*, **ἔθην* in Old Attic until the fourth century B.C. and from then onwards the *-κα* became extended to the dual and plural; cp. also *ἥκα* : Lat. *jē-cī*, pl. *elīμεν* from **ἔγεμεν*.

b. Dissyllabic light Bases (§§ 456–7).

§ 505. This type of aorist, without and with reduplication, belonged to the so-called thematic conjugation, as *λιπεῖν*, *ἔλιπον* : *λείπω*, *πιθέσθαι*, *ἔπιθον* : *πείθω*, *ῆρικον* : *ἐρείκω*, *ῆριπον* : *ἐρείπω*, *ἔστιχον* : *στείχω*; *ἔκυθον* : *κεύθω*, *πυθέσθαι* : *πεύθομαι*, *έρυγεῖν*, *ῆρυγον* : *έρεύγομαι*, *τυχεῖν* : *τεύχω*, *ἔφυγον* : *φεύγω*; *ἔδρακον* = Skr. *ádṛśam* : *δέρκομαι*, *τραπεῖν* : *τρέπω*, *ἔτραφον* : *τρέφω*. To verbs with characterized presents, as *λαβεῖν*, *ἔλαβον* : *λαμβάνω*, *λαθεῖν*, *ἔλαθον* : *λανθάνω*, *ἔλαχον* : *λαγχάνω*; *δακεῖν*, *ἔδακον* : *δάκνω*, *καμεῖν*, *ἔκαμον* : *κάμνω*; *θανεῖν*, *ἔθανον* : *θνήσκω*; *βαλεῖν*, *ἔβαλον* : *βάλλω* from **βαλյό*.

έ-σπέ-σθαι, *έ-σπε-το* : *ἔπομαι*, *έ-κέ-κλε-το*, *κέ-κλε-το* : *κέλομαι*, *πε-πιθ-εῖν*, *πέπιθον* : *πείθω*, *τε-τυκεῖν* : *τεύχω*, *τε-τάρπετο* : *τέρπω*, Hom. *ἔειπον* from **é-f-e-fπον* = Skr. *ánvōcam* from **á-va-uc-am*, Indg. **é-we-wqom*; *έ-τε-τμο-ν*, *έ-πε-φνο-ν*. *ῆγ-αγον* : *ἄγω*, *ῆν-εγκον*, inf. *ἐν-εγκεῖν*; *ῆρ-αρον*, inf. *ἀρ-αρεῖν*; *ῶρ-ορον* : *όρ-νῦμι*.

c. Dissyllabic heavy Bases (§§ 458–9).

§ 506. The aorists of this type belonged to the athematic conjugation and originally contained a long vowel or the long diphthong *-ēi-* in the second syllable of the base. The long vowel including the *-ē-* from older *-ēi-* (§ 458) belonged to all forms of the active and middle, but it was regularly shortened in the third person plural in prim. Greek (§ 70), as *πτῆναι*, Dor. *ἔπτᾶν* : *πέταμαι*, *ἔδρᾶν* : Skr. *drā-ti*, *he runs*, Hom. *πλῆτο* : Skr. *á-prā-t*, *he filled*, Hom. *πλῆτο* : *πελάξω*, Att. *ἔγήρᾶν* : *γηρά-σκω*; *ἔτλην*, Dor. *ἔτλᾶν*, *ἔσβην*, *ἔγνων*; *ἔβλην*, *έμάνην*, *ἔφάνην*, *έχάρην*; *ἔφῦν*, *ἔφū* = Skr. *á-bhū-t*, from **é-bhū-t*, older **é-bhwē-t*, *he was* : base **bhewā-*, *be*. It is not clear in what relation *ἔβην* (Dor. *ἔβᾶν*), *ἔβη* = Skr. *ágām*, *ágāt*, stands to *βαίνω*, Lat. *venio*. These aorists in *-ην* = Indg. *-ēm* with in-

transitive meaning became productive in Greek and came to be used as passive aorists (§ 514), as ἐκλάπην : κλέπτω, ἐγράφην : γράφω, ἐμίγην : μίγνυμι, ἐρρύνην : ρέω, ἐσάπην : σήπω, ἐτάκην : τήκω, ἐτάρπην : τέρπω, ἐτράπην : τρέπω, &c.

2. THE S-AORIST.

§ 507. The s-aorist, also called the weak or first aorist, belonged to the athematic conjugation and originally had the following endings:—sing. -s·m₀, -s·s, -s·t, pl. -s·men or -s·mn₀ (§ 437), -s·te, -s·nt. In formation it was morphologically related to the s-presents of Class IX (§ 468) and stood in the same relation to those presents as the strong aorist did to its corresponding presents (§ 456). The s-aorist was preserved in Greek, Aryan and the Slavonic languages, whereas in Latin it came to be used for the perfect (cp. ἐδειξα, ὠρεξα, Skr. á-vākṣam beside dīxī, rēxī, vēxī), and in the other languages it disappeared entirely except in a few isolated forms. This type of aorist became very productive in Greek, especially as an aorist-formation for denominative verbs and for those verbs which did not have a root-aorist. The inflexion of an aorist like ἐδειξα was in the parent Indg. language:—sing. *é-dēik-s·m₀, *é-dēik-s·s, *é-dēik-s·t, pl. *é-dik-s·men (-mn₀), *é-dik-s·te, *é-dik-s·nt. In Sanskrit the long diphthong or long vowel of the singular was levelled out into the dual and plural, cp. Skr. árāikṣam, árāukṣma = ἐλεῖψα, ἐλεῖψαμεν; áyāukṣam, áyāukṣma = ἐξενξα, ἐξενξαμεν; ákṣārṣam, ákṣārṣma = ἐφθειρα from *éphθερσα (§ 217), ἐφθειραμεν; cp. the similar levelling in Latin dīximus, rēximus : dīxī, rēxī. The long diphthong of the singular was regularly shortened in prim. Greek (§ 63) and then levelled out into the dual, plural and extended by analogy to the whole of the middle which originally contained the weak grade of ablaut, cp. Skr. middle ádikṣi, áyukṣi beside Gr. ἐδειξάμην, ἐξενξάμην. The old weak grade of ablaut

was preserved in *iσαν*, and *ἡσαν* from **ἥτισαν*, *they knew*, but apart from a few such isolated forms the vowel in the stem-syllable of the active and middle of the s-aorist to dissyllabic bases was due to the analogy of the present stem and the stem of the aorist subjunctive = s-future (§ 499). This is especially clear in such forms as *ἴγλυψα*, *ἴγραψα*, *ὁμορξα*, *ἴστιξα*, *ἴσχισα* : *γλύφω*, *γράφω*, *δόμρηγνῦμι*, *στίξω*, *σχίξω*, *ἴπηλα* from **ἐπαλσα* : *πάλλω*. Aorists like *ἴδειξα*, *ἴζευξα* can represent the original forms with long diphthongs or be new formations with -ει-, -ευ- from the present. The prim. Greek inflexion of the active and middle of *ἴδειξα*, *ἴλυσσα* and similar aorists was :—

Sing.	* <i>ἴδεικσ-α</i>	* <i>ἴλυσ-α</i>	* <i>ἴδεικσ-μᾶν</i>	* <i>ἴλυσ-μᾶν</i>
	* <i>ἴδεικσ-s</i>	* <i>ἴλυσ-s</i>	* <i>ἴδεικσ-σο</i>	* <i>ἴλυσ-σο</i>
	* <i>ἴδεικσ-(τ)</i>	* <i>ἴλυσ-(τ)</i>	* <i>ἴδεικσ-το</i>	* <i>ἴλυσ-το</i>
Plur.	* <i>ἴδεικσ-μεν</i>	* <i>ἴλυσ-μεν</i>	* <i>ἴδεικσ-μεθα</i>	* <i>ἴλυσ-μεθα</i>
	* <i>ἴδεικσ-τε</i>	* <i>ἴλυσ-τε</i>	* <i>ἴδεικσ-σθε</i>	* <i>ἴλυσ-σθε</i>
	* <i>ἴδεικσ-α(τ)</i>	* <i>ἴλυσ-α(τ)</i>	* <i>ἴδεικσ-ατο</i>	* <i>ἴλυσ-ατο</i>

The -α in the first person singular of the active regularly corresponds to Indg. -*μ* (§ 65, 1) and in the third person plural to Indg. -*η* (§ 65, 1). The ending of the first person singular thus fell together with the ending of the perfect (*οἶδα*, *λέλοιπα*). After the analogy of *οἶδα* : *οἶδε* to *ἴδειξα* was formed *ἴδειξε*, and then the -α of the first person singular was levelled out into the second person, and at a later period the -as was extended analogically to the perfect (*λέλοιπας*). The -α of the third person plural was levelled out into the dual and the other persons of the plural. Hence arose the usual forms : *ἴδειξα*, *ἴδειξας*, *ἴδειξε*; *ἴδειξατον*, *ἴδειξάτην*; *ἴδειξαμεν*, *ἴδειξατε*, *ἴδειξαν* (with -ν from imperfects like *ἴφερον*, § 439); *ἴλυσα*, *ἴλυσας*, *ἴλυσε*; *ἴλυσατον*, *ἴλυσάτην*; *ἴλυσαμεν*, *ἴλυσατε*, *ἴλυσαν*. From the active the -α was then extended to all forms of the middle (*ἴδειξάμην*, *ἴλυσάμην*;

έδείξαντο, *έλύσαντο* with *-ντο* from thematic verbs like *έφέροντο*; *έδείξω*, *έλύσω* with *-ώ* from older *-αστο*), including the optative, imperative, infinitive and participle.

Before this levelling out of the *-α-* took place the *-σ-* in the dual and the first and second persons plural of the active and in the whole of the middle except the third person plural regularly disappeared in prim. Greek when the stem ended in a consonant (§§ 214, 221), but it was generally restored again at a later prehistoric period after the analogy of forms where it regularly remained. The regular old middle was preserved in Homeric forms like *ἄλτο*, *ἄλμενος* : *ἄλλομαι*, *ἄρμενος* : *ἡρσα*, *δέκτο* : *δέχομαι*, *κατέπηκτο* : *κατέπηγα*, *λέκτο* : *ἔλεξα*, *ἔμικτο* : *ἔμιξα*, *πάλτο* : *ἔπηλα* from **ἐπαλσα*; *ῳρτο* : *ῳρσα*, &c.

§ 508. When the base ended in a nasal the *-μσ-* and *-νσ-* became assimilated to *-μμ-*, *-νν-* which remained in Lesb. and Thess. but became simplified with lengthening of the preceding vowel in the other dialects as *ἔνειμα*, Lesb. *ἔνεμμα* : *νέμω*; *ἔμεινα*, Lesb. *ἔμεννα* : *μένω* (§ 216); *ἔφηνα* from **ἔφανσα* : *φαίνω*, *ἔφηνα* from **ὔφανσα* : *ύφαίνω*; and similarly with the verbs in *-αίνω*, as *ἐλέηνα* : *λεαίνω*, Hom. *λειαίνω*, *ώνόμηνα* : *ὄνομαίνω*, *ἔξήρανα* (§ 216) : *ξηραίνω*; *ἐπέρανα* : *περαίνω*.

§ 509. When the base or stem ended in a liquid assimilation also generally took place, with simplification of the double liquid and lengthening of the preceding vowel in Att. Ion., as *ἔπηλα* from **ἐπαλσα* : *πάλλω*; *ἔστειλα*, Lesb. *ἔστελλα* : *στέλλω*; *ἔσφηλα*, *ῆγγειλα*, *ἔτιλα*; *ἔφθειρα*, Lesb. *ἔφθερρα* from **ἔφθερσα* : *φθείρω*; *ἔστρα* (§ 217), &c., beside *ἔκελσα*, *ἔκερσα*, *ῳρσα*. In bases or stems ending in a dental the dental + *-σ-* became *-σσ-* which was simplified to *-σ-*, as *ἔβλισα* : *βλίττω*, *βλίσσω* from **βλιτζώ*; *ἔπειρσα* : *πέρθω*, *ἔπεισα* : *πείθω*; *ἔψευσα* : *ψεύδω*, *ἔφεισάμην* : *φείδομαι*, *ῆλπισα* : *ἔλπίζω* from **ἔλπιδʒω* (§ 166). The *ξ* in presents ending in *-ξω* came from *-δj-* and *-γj-* (§ 129, 8).

When it came from the former the aorist regularly had *-σ-* from older *-στ-*, and *-ξ-* when from the latter, but in consequence of the presents being alike confusion arose in the aorist, cp. Hom. ἥρπασα beside ἥρπαξα : ἀρπάξω from *ἀρπαγῶ; Att. ἐσάλπισα beside ἐσάλπιγξα : σαλπίξω from *σαλπιγγῆ. In Doric the *-ξ-* became generalized for both kinds of aorists. On forms like Hom. ἔχεσσα, ἔτρεσσα, ἐτέλεσσα beside Att. ἔχεσα, ἔτρεσα, ἐτέλεσα : ζέω, τρέω, τελέω from *ζεσω, *τρεσω, *τελεσ-*jω*, see § 212, 2. This *-σσ-* from bases or stems ending in *σ* became productive in the oldest period of the language and is common in Aeolic, Homer and his imitators, as ἐγέλασσα, ἔμεσσα, ἐπέρασσα, δαμάσσαι, ἐλάσσαι, κρεμάσσαι, δλέσσαι, ὁμόσσαι, &c.

§ 510. The *-σ-* also regularly disappeared in prim. Greek in several of the forms of bases or stems ending in a vowel, viz. in the first person singular of the active, the third person plural of the active and middle (§ 213, 2), in the first person singular of the middle and the first person plural of the active and middle (§ 214), but here again the *-σ-* was mostly restored after the analogy of those forms of the vocalic and consonantal bases and stems where it regularly remained. In aorists like ἡλεύατο : ἡλευσα, ἔσσενα (*ἔσενα*), ἔχεα (Hom. also ἔχενα), ἀλέασθαι the old *σ*-less form became generalized. Apart from a few such isolated aorists without *-σ-*, all the vocalic bases and stems had intervocalic *-σ-* already in the oldest historic period of the language, as ἔμεσα, ἔδάμασα, ὄμοσα, ἔχρησα (§ 512); ἐτίμησα, ἔφιλησα, ἔμίσθωσα (§ 483); ἔφόρησα (§ 497).

§ 511. The stem-syllable of dissyllabic light bases had originally a lengthened vowel or diphthong in the singular of the active and weak grade vowel in the dual, plural and the whole of the middle (§ 507), but this original distinction was not entirely preserved in any of the languages in historic times. As we have already seen the Greek stem

of the aorist was a new formation formed direct from the present-stem and the stem of the aorist subjunctive (§ 507), as ἔβλαψα : βλάπτω, ἔπεμψα : πέμπω, ἔλεξα : λέγω, ἔπλεξα : πλέκω, and similarly ἔγραψα, εἶξα, ἔκοψα, ἔτερψα, ἔτηξα, ἔθρεψα, &c.; middle ἔγραψάμην, ἔκοψάμην, ἔθρεψάμην, ἔπλεξάμην, &c. ἔδειξα : Lat. *dixi*, ἔλειψα : Skr. *árāikṣam*; ἔξενξα : Skr. *ájāukṣam*, ἔτευξα : τεύχω, ἔχεα (Hom. also ἔχενα) : χέω; middle ἔδειξάμην, ἔξενξάμην, ἔχεάμην, &c. In forms like ἔτεισα : Skr. *ácāiṣam*, ἔπλευσα the intervocalic -σ- was restored after the analogy of forms like ἔδειξα, &c. where the -σ- was not intervocalic. ἔσφηλα, ἔφθειρα from *ἔσφαλσα, *ἔφθερσα (§ 217), and similarly ἔτιλα, ἔδειρα, ἔσῦρα, &c. beside ἔκελσα, ἔκερσα, ὥρσα. ἔτεινα from *ἔτενσα (§ 216), and similarly ἔκτεινα, ἔμεινα, ἔνειμα, ἔθεινα; ἔσπεισα from *ἔσπενσα : σπένδω. ἔπεισα : πείθω, ἔψεισα : ψεύδω (§ 166). ἔξεσα : ξέω (§ 212, 2), εὖσα : εὔω.

§ 512. The aorists formed from dissyllabic heavy bases belong to the presents of Class IV (§ 458) and may be divided into two types according as the second syllable of the base contained the weak or the strong grade of ablaut. To the former belong aorists like ḡμεσα : ἐμέω, ḡλεσα ; ḡδάμασα : δαμάω, ḡκέρασα, ḡκλασα, ḡκρέμασα, ḡλασα, ḡπέλασα, ḡγήρασα ; ḡροσα, ḡμοσα ; ḡφūσα : ἔφῦν. And to the latter ḡδέησα, ḡδεύησα, ḡθέλησα, ḡμνησα, ḡνησα, ḡχρησα ; ḡδρᾶσα ; ḡν-ἔγνωσα : Skr. *ájñāsam*. The intervocalic -σ- in all these and similar aorists was restored after the analogy of aorists like ἔδειξα, &c.

§ 513. The formative element of characterized presents was often extended to the aorist, as ḡκλῖνα from *ḡκλινσα : κλῖνω from *κλι-νήω ; ḡμῦνα, ḡμῦνάμην : ḡμῆνω ; ḡπλαγξα : πλάξω from *πλαγγήω, cp. Lat. *plango*, *plānxi*; ḡδίδαξα, ḡποίφυξα, ḡτέτρηνα : διδάσκω, ποιφύσσω, τετραίνω, &c.

THE PASSIVE AORIST IN $\cdot\theta\eta\nu$.

§ 514. The parent Indg. language had no special forms which were used exclusively to express the passive voice, but already at that period the middle came to have also a passive meaning which was preserved in Greek in such forms as $\dot{\epsilon}\text{-}\delta\delta\text{-}\theta\eta\varsigma$, $\dot{\epsilon}\text{-}\tau\acute{e}\text{-}\theta\eta\varsigma$, $\dot{\epsilon}\text{-}\kappa\tau\acute{a}\text{-}\theta\eta\varsigma$ = Skr. $\bar{a}\text{-}di\text{-}thāḥ$, $\bar{a}\text{-}dhi\text{-}thāḥ$, $\bar{a}\text{-}kṣa\text{-}thāḥ$. The forms of the passive voice are accordingly expressed variously in the different Indg. languages. In Greek the only passive forms distinct from the middle are the second aorist in $\text{-}\eta\nu$ and the first aorist in $\text{-}\theta\eta\nu$. The aorist in $\text{-}\eta\nu$ is, as we have already seen (§ 458), originally an active athematic formation with intransitive meaning which came to be used to express the passive in Greek. This aorist in $\text{-}\eta\nu$ was also an important factor in the origin and development of the aorist in $\text{-}\theta\eta\nu$ which was a special Greek new formation and probably in part of the same origin as the preterite of denominative verbs in the Germanic languages. The origin of the aorist in $\text{-}\theta\eta\nu$ is difficult to account for satisfactorily. It is probable that several factors played an important part in its origin and development. Starting out from the second person singular of the aorist middle with the secondary ending $\text{-}\theta\eta\varsigma$ (= Indg. $\cdot\thetaē\varsigma$, Skr. $\cdot thāḥ$, § 443) which occurs in such forms as $\dot{\epsilon}\text{-}\delta\delta\text{-}\theta\eta\varsigma$, $\dot{\epsilon}\text{-}\tau\acute{e}\text{-}\theta\eta\varsigma$, $\dot{\epsilon}\text{-}\sigma\tau\acute{a}\text{-}\theta\eta\varsigma$, $\dot{\epsilon}\text{-}\kappa\tau\acute{a}\text{-}\theta\eta\varsigma$ = Skr. $\bar{a}\text{-}di\text{-}thāḥ$, $\bar{a}\text{-}dhi\text{-}thāḥ$, $\bar{a}\text{-}sti\text{-}thāḥ$, $\bar{a}\text{-}kṣa\text{-}thāḥ$, there was formed $\dot{\epsilon}\text{-}\delta\delta\text{-}\theta\eta\nu$, $\dot{\epsilon}\text{-}\delta\delta\text{-}\theta\eta$, &c. : $\dot{\epsilon}\text{-}\delta\delta\text{-}\theta\eta\varsigma$ after the analogy of aorists like $\dot{\epsilon}\text{-}\muáv\text{-}\eta\nu$, $\dot{\epsilon}\text{-}\muáv\text{-}\eta$, &c. : $\dot{\epsilon}\text{-}\muáv\text{-}\eta\varsigma$, thus creating a complete new aorist out of a single form. But it is improbable that the aorist in $\text{-}\theta\eta\nu$ had its origin solely in the $\text{-}\theta\eta\varsigma$ of forms like $\dot{\epsilon}\text{-}\delta\delta\text{-}\theta\eta\varsigma$, &c. In part at least it was probably also a periphrastic formation which was originally confined to denominative verbs, as in $\dot{\epsilon}\text{-}\tau\iota\mu\bar{h}\text{-}\theta\eta\nu$, $\dot{\epsilon}\text{-}\phi\iota\lambda\bar{h}\text{-}\theta\eta\nu$, $\dot{\epsilon}\text{-}\delta\eta\lambda\bar{h}\text{-}\theta\eta\nu$, $\dot{\epsilon}\text{-}\delta\acute{e}\sigma\text{-}\theta\eta\nu$, &c., and then at a later period became extended to primary verbs as well. In this respect it

corresponds exactly in formation with the preterite of denominative verbs in the Germanic languages, as Goth. *salbō-da*, *I anointed*, *salbō-dēs*, *salbō-da*, where *-da*, *-dēs*, *-da* = Indg. *-dhēm*, *-dhēs*, *-dhēt*, which was originally an aorist of the root **dhē-* which occurs in *τίθημι*. If the assumption is right that the aorist in *-θην* was in part a periphrastic formation, there must have been a time when two types of the dual and plural existed side by side, viz. *ἐδόθην* : *ἐδόθημεν*, &c. and *ἐτιμήθην* : **ἐτιμήθεμεν* (cp. *ἔθεμεν*), &c. and that then the form *-θημεν* with *-η-* became generalized. The periphrastic formation was originally active both in form and meaning as in the Germanic languages, but in Greek it became passive in meaning through the influence of the aorists of the type *ἐδόθην*, *ἐμάνην*. The aorist in *-θην* became very productive in the prehistoric period of the language and already in Homer it was far more common than that in *-ην*. Its great expansion was doubtless due to the large mass of denominative verbs.

THE PERFECT.

§ 515. The perfect had originally certain well-defined characteristics which clearly distinguished it from the other tenses. The more important of these characteristics were :—

- (a) The personal endings in the active singular, as Indg. **wóid-a*, **wóit-tha*, **wóid-e=ołd-a*, *ołd-tha*, *ołd-e*, Skr. *véd-a*, *vét-tha*, *véd-a*. What the original endings of the dual and plural were cannot be determined, because there is little or no agreement amongst the languages which have preserved the perfect forms in historic times (see §§ 440–1). (b) Reduplication with *e* (rarely *ē*) in the reduplicated syllable. (c) A different grade of ablaut in the active singular as compared with the active dual, plural, and the whole of the middle. (d) A special participial ending (§ 552).

§ 516. The perfect generally had reduplication with e in the reduplicated syllable, as *δέ-δορκα* = Skr. *da-dárśa*; *πέ-πηγα* = Lat. *pe-pigī*. Beside e there also existed ē which is rare in Greek (cp. Hom. *δη-δέχαται* : *δέχομαι*) but common in Vedic. Latin and especially the Germanic languages show that unreduplicated perfects were also common in the parent Indg. language. But the reason why the perfect was originally formed partly with and partly without reduplication is unknown. The forms with reduplication became productive in Greek and Sanskrit and those without it in Latin and the Germanic languages. Already in the prim. Germanic period the old perfect active came to be used as a simple preterite and then a new periphrastic perfect was formed. What is called the perfect in Latin was a mixture of various kinds of formations, e. g. old perfects, as *tu-tudī*, *de-dī*, *vēnī*, *lēgī*; old strong aorists, as *te-tigī*, *pe-pulī*, *fidi*, *scidī*; and old s-aorists, as *dixī*, *lēxi*, &c. (§ 507).

Greek, Old Latin and Gothic show that the reduplicated syllable originally contained e, cp. O.Lat. *me-mordī*, *pe-pugī*, *te-tulī*, classical Lat. *ce-cidī*, *de-dī*, &c.; Goth. *hái-háit*, *he called*, *ga-raí-rōþ*, *he reflected upon*: inf. *háitan*, *ga-rēdan*. But in classical Latin the vowel in the reduplicated syllable became assimilated to that of the root-syllable when the present and perfect had the same vowel, as *mo-mordī*, *pu-pugī* : *mordeo*, *pungo*. In Sanskrit the reduplicated syllable generally had a = Indg. e (§ 42), as *da-dárśa* = *δέ-δορκα*, but when the root-syllable contained the ablaut ē : i = Indg. *oi* : i; ë : u = Indg. *ou* : u, the vowel in the reduplicated syllable became assimilated to that in the root-syllable of the active dual and plural, and of the middle, as *ri-réca* = *λέ-λοιπα*, pl. *ri-ricimá*; *tu-tóda*, *I have pushed* = Goth. *staí-stáut*, pl. *tu-tudimá*.

§ 517. In dealing with the reduplicated syllable it is necessary to distinguish between bases or stems which

began with a consonant and those which began with a vowel. When the base or stem began with a single consonant the reduplication consisted of this consonant + ϵ , as δέ-δορκα, λέ-λοιπα, but with dissimilation of aspirates, as πέ-φενγα, τέ-θεικα, κέ-χυμαι (§ 115). When the base or stem began with an explosive plus a nasal or liquid, the reduplication generally consisted of the explosive + ϵ , as πέ-πνευκα, τέ-θνηκα (with dissimilation of the aspirate), γέ-γραφα, γέ-γλυμμαι. But combinations like γν-, βλ-, ζ-, ξ-, ψ-, κτ-, πτ- generally had simply ἔ- for the reduplicated syllable, as ἔγνωκα, ἔβλάστηκα beside βεβλάστηκα, ἔξηκα, ἔξαμμαι, ἔψαλκα, ἔκτονα, ἔπταισμαι. In these and similar perfects the form of reduplication was due to the analogy of perfects like ἔσχηκα, ἔσχημαι : ἔχω. In bases or stems originally beginning with s, w; s or w+a consonant we have ἔσχηκα : ἔχω from *σεχω; ἔουκα from *fe-foικα, ἔολπα; εἴμαρται from *σε-σμαρται, εἴληχα from *σε-σληχα, εἴληφα, εἴλοχα; εἴωθα from *σε-σφωθα, ἔσταλκα from *σε-σταλκα, ἔστηκα from *σε-στηκα; ἔρρωγα, εἴρηκα, from *fe-fρωγα, *fe-φρηκα.

In bases or stems originally beginning with a vowel the e would regularly become contracted in the parent Indg. language, but it is not certain what were the rules governing this contraction in all cases, cp. ḥχα (with prim. Greek ḥ) : ḥγω beside Lat. ēgī : ago; ḥσ-θα which is properly the perfect of είμι (§ 452). In Greek it became the rule that the perfect had a long vowel. This occurs in the perfects with the so-called Attic reduplication, as Hom. ἔδ-ηδώς : Skr. áda, Lat. ēdī; ὁδ-ωδα, ὅλ-ωλα, ὅπ-ωπα, ὅρ-ωρα, ἔλ-ήλακα, ἔλ-ήλαμμαι; after the analogy of which were formed Att. ἀκ-ήκοα, ἀλ-ήλιφα, ἀλ-ήλιμμαι, ἔλ-ήλυθα, &c. This type of perfect with the so-called Attic reduplication was a special Greek new formation, and the reduplication was based on the analogy of the reduplicated presents and aorists.

§ 518. The perfect belonged to the athematic conjugation and accordingly had a difference of ablaut in the active singular as compared with the active dual, plural, and the middle. In verbs belonging to the e-series of ablaut the active singular had the strong grade o in the root-syllable, and the weak grade in all other forms, as *ołða*, Skr. *vēda*, Goth. *wáit*, *I know* : pl. *ið-μεν* (Att. *ἴσ-μεν*), Skr. *vid-má*, Goth. *wit-um*; *γέ-γον-α* : *γέ-γα-μεν*, *πέ-πονθα* : *πε-παθνία*, *τέ-τροφα* : *τε-τράφαται*. Other examples with o in the active singular are: *δέδορκα*, *δι-έφθορα*, *εἰλήλουθα*, *ἔκτονα*, *ἔμμορα*, *ἔοικα*, *ἔολπα*, *ἔοργα*, *ἔστροφα*, *κέκλοφα*, *κέχοδα*, *λέλογχα*, *λέλοιπα*, *πέποιθα*, *τέτοκα*. Or a long vowel in the active singular and ε (= Gr. α, § 49) in all other forms, as *λέ-ληθα* : *λέ-λασμαι*, *λέ-λασται*, *λε-λασμένος*. In the active singular the accent was originally on the root-syllable, as in Skr. *da-dárśa*, *ja-jána* beside Gr. *δέ-δορκε*, *γέ-γονε*. Sanskrit and the old Germanic languages preserved almost entirely the original distinction between the strong grade of ablaut in the active singular and the weak grade in the dual and plural, but in Greek the original distinction was in a great measure obliterated by levelling and new formations already in the oldest period of the language. Regular old forms were *ołða*, *ἔοικα*, *γέ-γονα*, *μέ-μονα* beside *iðμεν*, *ἔικτον* from **fε-ϝικτον*, *γέ-γα-μεν*, but *γεγόναμεν* with -o- from the singular, and similarly Hom. *εἰλήλουθμεν* beside *εἰλήλυθμεν* : *εἰλήλουθα*. In nearly all other verbs either the vowel of the singular was levelled out into the dual and plural, as in *ἔοίκαμεν*, *λελοίπαμεν*, *πεποίθαμεν*, *τετρόφαμεν*, *ἔρρωγαμεν* : *ἔοικα*, *λέλοιπα*, *πέποιθα*, *τέτροφα*, *ἔρρωγα*; and similarly with a large number of other verbs. Or more rarely the vowel of the dual and plural was levelled out into the singular, as in Att. *ἔλήλυθα*, *τέτραφα*. In many verbs the perfect active had its vowel direct from the stem of the present, as *πέφενγα* for **πέφουγα* : *φεύγω*, and similarly *βέβλεφα*, *γέγραφα*,

λέλεγα, πέπλεχα, βέβριθα, γέγηθα, ἔρριγα, κέκλαγγα : κλάξω from *κλαγγώ.

The weak grade of ablaut was mostly preserved in the middle, as δέδαρμαι, δέδαρμένος : δέρω, and similarly ἔσπαρται, πέπαρμαι, πεπαρμένος, πέπυσμαι, τέταρμαι, τετράφαται, τέθραμμαι, πέφαται, πεφυγμένος, &c. But the middle had also sometimes its vowel direct from the stem of the present, as λέλειμμαι, λέλειπται, λέλειμμένος : λείπω, and similarly γέγευμαι, γέγευται, τέτεισμαι, τέτεισται, Hom. τετεύχαται : τετυγμένος.

§ 519. The original inflexion of the active was fairly well preserved in a perfect like οἶδα, as

	Greek.	Skr.	Goth.
Sing. 1.	οἶδα	vēda	wáit
2.	οἶσθα	vēttha	wáist
3.	οἶδε	vēda	wáit
Plur. 1.	ἰδμεν (ἰσμεν)	vidmá	witum
2.	ἴστε	vidá	wituþ
3.	ἴσᾶσι	vidár	witun

On the Greek personal endings of the plural see § 441. The -σ- in *ἴσμεν*, *ἴσᾶσι* from **ἴσαντι* was due to levelling out of the -σ- in *ἴστε*, and in the dual *ἴστον* where it was regular (§ 110). This mode of inflexion was only preserved in a few verbs in Greek. All others had an -α- between the stem ending in a consonant and the personal ending beginning with a consonant, as λέλοιπα, λέλοιπ-α-ς, λέλοιπε, λέλοιπ-α-τον, λέλοιπ-α-μεν, λέλοιπ-α-τε, λέλοιπάσι, cp. also the Ionic new formations οἶδ-α-ς, οἶδ-α-μεν, οἶδ-α-τε, οἶδᾶσι. The most commonly accepted explanation of this -α- is that it first arose in the s-aorist (§ 507) and then became extended by analogy to the perfect. The -ασ of the second pers. sing. λέλοιπας was undoubtedly of this origin. On the discussion of other explanations which have been proposed see Brugmann, *Kurze vergl. Grammatik*, pp. 544-5.

§ 520. The κ -perfect, also called the first or weak perfect, was a Greek new formation which does not occur in the other Indg. languages. Although much has been written upon the subject, no really satisfactory explanation has ever been given of the origin of this formation. The κ is generally regarded as being a root-determinative, found in the aorists $\ddot{\epsilon}\theta\eta\kappa\alpha$ = Lat. $fēcī$: facio, $\hat{\eta}\kappa\alpha$ = Lat. $jēcī$: jacio, which became productive in Greek, cp. $\ddot{\epsilon}\deltaō\kappa\alpha$: $\ddot{\epsilon}\deltaōμεν$ after the analogy of $\ddot{\epsilon}\theta\eta\kappa\alpha$: $\ddot{\epsilon}\theta\mu\epsilon\nu$. Then after the analogy of these aorists were formed the perfects $\tau\acute{e}\theta\eta\kappa\alpha$, $\delta\acute{e}\deltaō\kappa\alpha$, $\acute{\epsilon}\sigma\tauη\kappa\alpha$: $\acute{\epsilon}\sigma\tauαμεν$, $\acute{\epsilon}\iota\kappa\alpha$ from $*jē\text{-}jē\kappa\alpha$, Dor. $\grave{\alpha}\phi\text{-}\acute{\epsilon}\omega\kappa\alpha$; $\pi\acute{e}\phi\acute{u}\kappa\alpha$, $\tau\acute{e}\tau\lambda\eta\kappa\alpha$: $\pi\acute{e}\phi\acute{u}\sigma\iota\iota$, $\tau\acute{e}\tau\lambda\alphaμεν$. From perfects of this type the κ -formation became extended in the first instance to all bases or stems ending in a vowel, and the κ was levelled out into the dual and plural, as $\tau\acute{e}\theta\eta\kappa\alpha$, $\tau\acute{e}\theta\eta\kappa\alphaμεν$ (later $\tau\acute{e}\theta\eta\iota\kappa\alpha$, $\tau\acute{e}\theta\eta\iota\kappa\alphaμεν$ with - $\iota\iota$ - after the analogy of $\acute{\epsilon}\iota\kappa\alpha$), and similarly $\beta\acute{e}\beta\eta\kappa\alpha$, $\beta\acute{e}\beta\lambda\eta\kappa\alpha$, $\beta\acute{e}\beta\varrho\omega\kappa\alpha$, $\gamma\acute{e}\gamma\acute{a}\mu\eta\kappa\alpha$, $\delta\acute{e}\delta\rho\acute{a}\kappa\alpha$, $\kappa\acute{e}\kappa\mu\eta\kappa\alpha$, $\acute{\epsilon}\gamma\acute{n}\omega\kappa\alpha$, $\nu\acute{e}\nu\acute{e}\mu\eta\kappa\alpha$, $\tau\acute{e}\tau\acute{e}\mu\eta\kappa\alpha$; $\delta\acute{e}\delta\acute{e}\kappa\alpha$: $\delta\acute{e}\delta\acute{e}\mu\acute{a}\iota\iota$, $\tau\acute{e}\tau\acute{a}\kappa\alpha$: $\tau\acute{e}\tau\acute{a}\mu\acute{a}\iota\iota$, &c. It was afterwards extended to those verbs which in the future and s-aorist had bases or stems that came to be felt as ending in a vowel, as $\pi\acute{e}\pi\acute{e}\iota\kappa\alpha$: $\pi\acute{e}\iota\sigma\omega$, $\acute{\epsilon}\pi\acute{e}\iota\sigma\alpha$, $\pi\acute{e}\iota\theta\omega$, and similarly $\acute{\epsilon}\sigma\pi\acute{a}\kappa\alpha$, $\acute{\epsilon}\sigma\pi\acute{e}\iota\kappa\alpha$, $\tau\acute{e}\tau\acute{e}\lambda\kappa\alpha$, &c. And then lastly in the post-Homeric period it was extended to bases and stems ending in a consonant, as $\acute{\epsilon}\phi\theta\acute{a}\kappa\alpha$, $\acute{\epsilon}\sigma\tau\acute{a}\kappa\alpha$: $\acute{\epsilon}\phi\theta\acute{a}\tau\acute{a}\iota\iota$, $\acute{\epsilon}\sigma\tau\acute{a}\lambda\tau\acute{a}\iota\iota$; $\acute{\epsilon}\gamma\acute{y}\acute{e}\lambda\kappa\alpha$, $\pi\acute{e}\phi\acute{a}\gamma\kappa\alpha$, &c. So that in the classical period the perfect of the majority of Greek verbs was formed with the suffix - $\kappa\alpha$ and the original difference of ablaut-grade between the active singular, and the dual and plural was disregarded.

§ 521. The aspirated perfect was also a Greek new formation and consisted in the aspiration of κ , γ , π , β when the perfect stem ended in one of these consonants. This new formation took place earlier in the third person of the middle than in the active. In Homer it is only found in the middle, as $\acute{\epsilon}\rho\chi\acute{a}\tau\acute{a}\iota\iota$, $\acute{\epsilon}\rho\chi\acute{a}\tau\acute{o}$: $\acute{\epsilon}\rho\gamma\omega$; $\delta\eta\delta\acute{e}$ -

χαται : δέκομαι; τετράφαται, τετράφατο : τρέπω. With the exception of πέπομφα : πέμπω and τέτροφα : τρέπω it is not found in the active in the early classical period. From about the time of Aristophanes and Plato onwards it became more and more common, as πέπλεχα : πλέκω, ήχα : ἄγω, βέβλεφα : βλέπω, and similarly δέδοχα, ἔπτηχα, κεκήρυχα, μέμαχα, πέπραχα, ἔξευχα, εἴλοχα, λέλεχα; βέβλαφα, ἔρριφα, κέκλοφα, κέκοφα, τέτριφα, &c. Both the middle and the active forms were analogical formations, starting out from verbs originally ending in an aspirate (χ, φ) which regularly fell together with those ending in κ, γ, π, β in all the middle forms except in the third person ending in -αται, -ατο, as γέγραμμαι, γέγραψαι, γέγραπται : τέτραμμαι, τέτραψαι, τέτραπται after the analogy of which were formed τετράφαται, τετροφα beside γεγράφαται, γέγραφα.

§ 522. Various phonological changes took place in the middle which have already been mostly dealt with in the Phonology. When the stem ended in a labial the labial became assimilated to a following μ, as λέλειμμαι, τέτριμμαι, γέγραμμαι : λείπω, τρίβω, γράφω (§117). Stems ending in κ, χ have γ before a following -μ, as πέπλεγμαι, ἀφίγμαι, πεφύλαγμαι, τέτυγμαι : πλέκω, ἀφικνέομαι, φυλάσσω from *φυλακήω, τεύχω. This γ was due to the analogy of forms like λέλεγμαι beside λέλεξαι, λέλεκται where γ regularly became κ before σ and τ and thus fell together in these forms with stems ending in κ, χ. Stems ending in σ and a dental generally have the endings -σμαι, -σμεθα, -σμενος with σ restored (§ 214) after the analogy of endings like -σται where the σ was regular, as ἔξεσμαι for *ἔξειμαι : ἔξεσται, and similarly ἔσπασμαι, ἔξωσμαι, τετέλεσμαι, &c. beside the regular forms ἔξωμαι (Attic inscriptions), γέγενμαι from which was formed γέγενται for *γεγενσται; λέλασμαι for *λέλαθμαι after the analogy of λέλασται : λέληθα, and similarly πέπεισμαι, πέπνουσμαι,

πέφρασμαι for **πέφραδμαι*, cp. -*πεφραδμένος*. The *σ* was also introduced analogically into stems ending in *v* or a vowel, as *πέφασμαι* : *πέφανται*, *ἔξηρασμαι*, *ῆφασμαι*, beside the regular forms *ἥσχυμμαι*, *ῳξυμμαι* with assimilation of *vμ* to *μμ* (§ 150); *τέτεισμαι*, *τέτεισται*, *ἔγνωσμαι*, *κέκλαυσμαι* beside the regular forms *κεκλαυμένος*, *κέκλαυται*.

THE PLUPERFECT.

§ 523. The parent Indg. language had no special forms which were used exclusively to express the pluperfect. It accordingly came to be expressed differently in the different languages. Greek had two distinct formations of the pluperfect.

1. The augmented perfect forms together with secondary personal endings. In this formation the active dual and plural were athematic, but the singular was thematic after the analogy of the imperfect, as Hom. *ἔστατον*, *ἔκτην*, *γεγάτην*, *ἐπέπιθμεν*, *ἐδείδιμεν*, *ἔσταμεν*, *ἔστατε*, *βέβασαν*, *ἐδείδισαν*, *ἔστασαν*, *μέμασαν*, *ἴσαν* from **ἵδσαν*, &c., but singular Hom. *ἐμέμηκον*, *ἐπέπληγον*, *ἔγέγωνε*, *δείδιε*, &c. Middle Hom. *τετύγμην*, *κεχόλωσο*, *ἐτέτακτο*, *ἐτέτυκτο*, *τετάσθην*, *βεβλήσατο*, *ἡλήλατο*.

2. But the usual mode of forming the active pluperfect started out originally from dissyllabic heavy bases ending in -*ε* in Greek (§ 458), to which were added in the singular the personal endings -*α*, -*ας*, -*ε* of the perfect, contracted with the -*ε* in Attic into -*η*, -*ης*, -*ει* (= Herodotus -*εα*, -*εας*, -*εε*); but dual -*ε-τον*, -*ε-την*, pl. -*ε-μεν*, -*ε-τε*, -*ε-σαν* where the -*ε* belonged to the base as in *ῳλώλε-μεν*. The -*ε* then became extended to other verbs, as *ἐλελοίπη*, *ἐλελοίπης*, *ἐλελοίπει*; *ἐλελοίπετον*, *ἐλελοίπέτην*; *ἐλελοίπεμεν*, *ἐλελοίπετε*, *ἐλελοίπεσαν*. At a later period in Attic were formed the endings -*ειν*, -*εις* with *ει* from the third person singular, and then the *ει* was levelled out into the dual and plural.

NOTE.—The prim. Greek preterite to *οἶδα* was formed from

the stem *feudh-* (cp. εἰδῆσω, and Lat. *vidē-re*) with -η- in all forms of the tense, as *ἡfeudhην, -ης, -η (Hom. ἡείδη), pl. *ἡfeudhμεν (= Hesych. ὥδημεν). ὥδεμεν, ὥδετε, ὥδεσαν were new formations after the analogy of ἐλελοίπ-ε-μεν, &c. The regular form of the first person singular would have been *ἥδην. The form ὥδεα, Att. ὥδη was either a new formation after the analogy of λελοίπ-εα, -η or else it was an aorist formation corresponding to a prim. Greek form *ἥfeudhσα (§ 430).

THE INJUNCTIVE.

§ 524. Beside the subjunctive there also existed in the parent Indg. language the injunctive which in appearance consisted of unaugmented indicative forms with secondary personal endings, cp. φέρε, φέρετε = Skr. *bhárat*, *bhárata*, beside the imperfect ἔφερε, ἔφέρετε = Skr. *á-bharat*, *á-bharata*; θέσ, δόσ for *θήσ, *δώσ = Skr. *dhāḥ*, *dāḥ*, beside the aorist *á-dhāḥ*, *á-dāḥ*. This mood, also sometimes called the impure subjunctive, was fully developed in Vedic and was used with an indicative and subjunctive meaning, but in classical Sanskrit it was only preserved in imperative forms and in combination with the negative particle *mā* = μή to express prohibitions, as *má kṛthāḥ*, *do not do*, *má dhāḥ*, *do not place*, beside the aorist *á-kṛthāḥ*, *á-dhāḥ*. The injunctive was originally used partly with a present meaning, e.g. when the verbal form was unaccented, as in *pró bheret beside *bhéret = φέρε, partly with a past meaning, and partly also with a voluntative or future meaning. But already in the prim. Indg. period the second and third persons (except the second pers. sing. active) had become part of the imperative system in making positive commands (§ 539), as ἔπεο, ἔπου = Lat. *sequere*, Indg. *séqeso; φέρετε, φέρετον, φερέτων for *φερέτāν = Skr. *bhárata*, *bháratam*, *bháratām*; middle φέρεσθε, φέρεσθον, φερέσθων. In Sanskrit and prim. Greek the

second pers. sing. of the aorist active also came to be used for the imperative, as *dháḥ*, *dáḥ* = *θέσ*, *δόσ*, and similarly *ēs*, *ἐνί-σπες*, *σχές*, &c.

THE SUBJUNCTIVE.

§ 525. The original subjunctive, also called conjunctive, was preserved in Greek, Latin and Vedic, but in classical Sanskrit it had practically disappeared and its place was taken by the optative. It was also supplanted by the optative in the prehistoric period of the Germanic and Baltic-Slavonic languages. The original personal endings were partly primary and partly secondary. In the parent Indg. language the subjunctive was formed in various ways according as the stem of the indicative ended in (a) a consonant or (b) in *-e*, *-o* (dissyllabic light bases) or (c) in a long vowel (monosyllabic and dissyllabic heavy bases).

§ 526. Type (a). The subjunctive to indicative stems ending in a consonant had the characteristic formative element *-e*, *-o*. The *-e*, *-o* was doubtless of the same origin as the *-e*, *-o* in the present and strong aorist of the thematic verbs, as *λείπο-μεν*, *λείπε-τε*, *ἐλίπο-μεν*, *ἐλίπε-τε*, so that the subjunctive of this type was the same in form as the present indicative of the thematic verbs. To this type belong presents and strong aorists like *ἔω*, *ώ* = Lat. fut. *ero*, Indg. **esō*, Hom. *ἴομεν* : indic. *ἴμεν*, *ἄλεται* : *ἄλτο*, *φθίεται*, *φθίόμεσθα* : *φθίτο*; the verbs *ἔδομαι*, *πίομαι*, *χέω*, &c. which came to be used as futures (§ 498). s-aorists, common in Homer and his imitators, as *ἀλγήσετε*, *ἀγείρομεν*, *βήσομεν*, *τείσομεν*, *ἀμείψεται*, Ion. *ποιήσει*, Cret. *δείκσει*, *όμόσει*; fut. *ἄξω*, *οῖσω*, *ὄψομαι* (§ 499); the imperatives *ἄξετε*, *οῖσε*, *ὄψεσθε*, *λέξεο*, &c. Perfects like Hom. *εἴδομεν*, *εἴδετε* : *οἶδα*, but *εἰδώ* from **feιδεσω*, *πεποίθομεν*.

From the time of Homer onwards the *-e*, *-o* began to be supplanted by *-η*, *-ω* in all tenses except in those forms

which became used for the future and imperative. This change in Greek as in other Indg. languages was doubtless due to the fact that the latter was a more distinctive formation of the subjunctive, cp. *ἴωμεν* beside Hom. *ἴομεν*, *τείσωμεν*, *πεποίθωμεν*, &c.

§ 527. Type (b). The subjunctive to thematic indicative stems (dissyllabic light bases) had in Greek -η-, -ω- corresponding to the -ε-, -ο- of the indicative. It is uncertain whether this -η- and -ω- existed in the parent Indg. language or whether the -η- alone belonged originally to all forms of the subjunctive. So far as Greek is concerned the -η-, -ω- might be a contraction of the -ε-, -ο- in dissyllabic light bases like *φέρε*, *φέρο*- with the -ε-, -ο- which occurs in the subjunctive of type (a), but this explanation does not account for the long -ā- in forms like Lat. *ferā-mus*, *ferā-tis* beside the fut. *ferē-mus*, *ferē-tis*. Sanskrit unfortunately throws no light upon this difficult point, because in this language Indg. ē, ō, ā all fell together in ā (§ 42). It is, however, far more probable that the -η- originally belonged to all forms of the singular, dual and plural, and that **φέρην*, **φέρημεν*, **φέρηντι* then became *φέρω*, *φέρωμεν*, *φέρωντι* (*φέρωσι*) after the analogy of the present indic. *φέρω*, *φέρομεν*, *φέροντι* (*φέρουσι*). This -η- had its origin in dissyllabic heavy bases ending in -ē (§ 458), cp. subj. *ἴδη-τε* : Lat. *vidē-te*, *πίθη-ται* : *πεπιθή-σω*, *βάλῃ* : ē-βλη-ν, and it is probable that the whole formation originally started out from the injunctive forms of the strong aorist of such bases as regularly had η in all forms of the singular, dual and plural (§ 528). And in like manner the ā, which occurs in Latin, Keltic and the Slavonic languages, probably started out from the injunctive forms of dissyllabic bases ending in -ā (§ 458). The inflexion of type (b) in Vedic was sing. *bhárā-ni*, *bhárā-s(i)*, *bhárā-t(i)*, pl. *bhárā-ma*, *bhárā-tha*, *bhárā-n*, but in Greek *φέρω*, *φέρης*, *φέρη*, *φέρω-μεν*, *φέρη-τε*, *φέρω-ντι* (*φέρω-σι*), where *φέρης*, *φέρη* from older

*φέρη-εις, *φέρη-ει had ει from the endings of the present indicative. The regular forms would have been *φέρη-σ, *φέρη. For φέρω-ντι (φέρω-σι) we should have expected *φέρο-ντι (*φέρουσι) with shortening of the -ω- (§ 70), but either the -ω- was introduced into the third person plural after the law for the shortening of long vowels in this position had ceased to operate, or else it was re-introduced from φέρω-μεν in order to preserve the distinction between the subjunctive and indicative.

In like manner was formed the subjunctive of denominative verbs from vocalic stems, as τιμάωμεν, τιμάητε, φιλέωμεν, φιλέητε, Att. τιμᾶμεν, &c. The contracted forms of the subjunctive and indicative of τιμάω regularly fell together in Attic in the second and third persons singular, and then after the analogy of these the indicative forms δηλοῖς, δηλοῖ also came to be used for the subjunctive of δηλῶ.

§ 528. Type (c). The subjunctive to indicative stems ending in a long vowel. Here a distinction must be made according as the final long vowel of the indicative stem originally belonged (1) to all forms of the singular, dual and plural or (2) belonged only to the active singular. The regular old subjunctive forms of (1) were preserved in some Doric dialects, as Mess. γράφηντι beside Att. γράφωσι, Heracl. οἰκοδόμηται : indic. οἰκοδομεῖται, Cret. πέπāται, Ther. πέπrātai. But already in Homer the original forms were remodelled after the analogy of types (a) and (b), as δαμήω, δαμήετε : ἐ-δάμην, τραπήομεν : ἐ-τράπην, γνώομεν : ἔ-γνων, &c. beside δαμῆης, φανῆη, γνῶη, γνώσι, &c. Prim. Greek had in (2) the long vowel in all forms, but it cannot be determined what were the original Indg. forms of the dual and plural active and of the middle. A few such forms have been preserved in various dialects, as Cret. δύνāμαι, νύνāται, νύνāντι, ιθθāντι = ἴστāντι, Mess. προ-τίθηντι, Arcad. ἐπισυν-ἴστāτοι, δέατοι (§ 444), &c. But already in Homer the prim. Greek forms

were also here remodelled after the analogy of types (*a*) and (*b*), as *δώμεν*, *θήμεν*, *στήμεν*, *στήσετον*, and with quantitative metathesis, Hom. *θέωμεν*, *στέωμεν*, &c. (§ 72), beside *δώσις(ν)*, *στήσι(ν)*, *δώγμη(ν)*, *στήγη(ν)*, &c. Attic regularly has the contracted forms, as *διδῶ*, *διδῷς*, *διδῷ*, *διδῶμεν*, *διδῶτε*; *τιθῶ*, *τιθῆσ*, *τιθῆ*, *τιθῶμεν*, *τιθῆτε*, &c.

§ 529. In some verbs Attic and Ionic had new formations in the middle. After the analogy of *φέρωμαι* : *φέρηται* was formed *τίθωμαι* : *τίθηται*. After *ᾳ* had become *ῃ* in Attic and Ionic (§ 51) we then also have *ἐπίστωμαι* : *ἐπίστηται*, and similarly *δύνωμαι*, *κρέμωμαι*, *μάρνωμαι*. The circumflex in *τιθῶμαι*, *διδῶμαι*, *ἰστῶμαι* was due to the analogy of the active.

THE OPTATIVE.

§ 530. The optative was originally formed in two ways according as the corresponding tense-stems of the indicative were athematic or thematic. The optative to the athematic indicative stems had the formative element *-(i)jē-*, *-i-* where *-i-* was the weak grade of *-jē-* (§ 90), and the optative to thematic indicative stems had *-i-* which combined with the thematic vowel *-o-* to form the diphthong *-oi-*. Both types of optatives had secondary personal endings.

§ 531. In the first type of optative the active singular had *-(i)jē-* and all other forms of the active and the whole of the middle had *-i-* before endings beginning with a consonant, but *-(i)j-* before endings beginning with a vowel. In the active singular the accent was on the *-ē-*, but in all other forms on the personal endings, and the stem had accordingly the weak grade of ablaut. The weak form of the stem was however generally supplanted by the strong form already in prim. Greek, i.e. the optative came to be made direct from the strong grade form of the stem. The original manner of forming this type of the optative was only preserved in the historic period of the language when the stem originally

ended in a vowel or came to end in a vowel after the loss of intervocalic -σ- (§ 213, 2), as *στα-ίην*, *θε-ίην*; *ε-ίην*, *ε-ίμεν* from *έσ-την, *έσ-τμεν; *είδε-ίην*, *είδε-ίμεν* from *Γειδεσ-την, *Γειδεσ-τμεν. The original inflexion of *είην* was :—

	Indg.	Gr.	Skr.	O.Lat.
Sing. 1.	*s-(i)jé-m	είην	syám	siem
	*s-(i)jé-s	είης	syáḥ	siēs
	*s-(i)jé-t	είη	syát	siet
Plur. 1.	*s-i-m'	είμεν	syáma	sīmus
	*s-i-té	είτε	syáta	sītis
	*s-(i)j-ént	είεν	[syúr]	sient

In Greek the stem had the strong grade of ablaut which occurs in ἔσ-τι, so that the prim. Greek forms were *έσ-τη-ν, *έσ-τη-ς, *έσ-τή-(τ), pl. *έσ-τ-μέν, *έσ-τ-τέ, *έσ-τ-έν(τ). From the time of Homer onwards the -ιη- of the singular became levelled out into the dual and plural, as είητον, είητην, είημεν, είητε, είη-σαν, and similarly σταίημεν, θείη-μεν, δοίημεν. A similar levelling out of the -yā- also took place in the prehistoric period of Sanskrit, as syáma for *sīmá, whereas in classical Latin the -i- of the plural was levelled out into the singular, as sim, sīs, sit, and similarly in prim. Germanic, as in Old High German sī, sīs, sī, pl. sīm, sīt, sīn.

But the optative to indicative stems ending in a consonant came to be formed after the analogy of the thematic type already in prim. Greek, as λε-λοίπ-οι-μι, λε-λοίπ-οι-μεν : λέ-λοιπ-α; δείξ-αι-μι, δείξ-αι-μεν, δείξ-αι-το : ̄δειξ-α; λύσ-αι-μι, λύσ-αι-μεν : ̄λυσ-α; cp. on the other hand Skr. vid-yā-t : indic. vēd-a = oīdē; ri-ric-yā-t : indic. ri-rēc-a = λέ-λοιπ-ε; third pers. sing. of the s-aorist middle dīkṣ-ī-ta : indic. á-dīkṣ-i, cp. Lat. dīx-i-mus.

§ 532. The regular optative to dissyllabic heavy bases, which had a long vowel in the second syllable of all forms of the indicative, was in prim. Greek *δρᾶjήν, *γνωjήν, pl.

**δρᾶμεν*, **γνωιμεν* : indic. ē-*δρᾶν*, ē-*γνων*, pl. ē-*δρᾶμεν*, ē-*γνωμεν*, which would regularly have become **δρᾶην*, **γνωην* (§ 128), pl. **δραιμεν*, **γνοιμεν* with shortening of the long vowel (§ 63). The historic forms *δραίην*, *γνοίην* were new formations either after the analogy of *θείην*, *δοίην*, *σταίην* or else with *αι*, *οι* from the plural **δραιμεν*, **γνοιμεν*; and similarly ἀλοίην, βαλείην, βλείην, γηραίην, κιχείην, φανείην, &c. The circumflex in the pl. *δραῖμεν*, *γνοῖμεν*, ἀλοῖμεν, βαλεῖμεν, βλεῖμεν, κιχεῖμεν, φανεῖμεν, &c. as also in forms like *τιθεῖμεν*, *θεῖμεν* (§ 533) has never yet been satisfactorily explained, see Brugmann, *Griech. Grammatik*, third ed., p. 338.

§ 533. The optative to monosyllabic heavy ablaut-bases had the weak form of the base, as *τιθείην*, *θείην*, pl. *τιθεῖμεν*, *θεῖμεν* : indic. *τιθημι*, *τιθεμεν*. The *i* in the sing. *θείην*, &c. was either due to levelling out of the *i* of the dual and plural (except the third person which was also a similar new formation) into the singular or else it represented Indg. -ij-, as *d̥hə-i(j)e-m corresponding to Sanskrit *dheyām*. An Indg. form *d̥hə-jē-m would have become **θεην* in Greek. The circumflex in *θεῖμεν*, *τιθεῖμεν*, *θεῖτο*, *τιθεῖτο* presents the same difficulty as in *δραιμεν* for **δραιμεν* (§ 532); and similarly διδοίην, δοίην (Skr. *dēyām*), ισταίην, σταίην (Skr. *sthēyām*), φαίην, pl. διδοῖμεν, δοῖμεν, ισταῖμεν, σταῖμεν, φαῖμεν; pf. ἐσταίην, ἐσταῖμεν, τεθναίην. In Herodotus and later Attic the -η- of the active singular was levelled out into the dual and plural, as *θείημεν*, *δοίημεν*, *σταίημεν* (cp. § 531).

§ 534. The original formation of the optative to dis-syllabic heavy ablaut-bases was not preserved in Greek. The original optatives of this type were remodelled after the analogy of the thematic type, as *κρέμαιτο* : indic. *κρέμαται*; *δεικνύοιμι*, *δεικνύοιμεν*, *δεικνυόμην*, *δεικνυόμεθα*, the optative to presents in -νūμi would regularly have had *-νν(j)ην, pl. *-ννFημεν, cp. Skr. ग्-नु-या-त्, middle ग्-नु-व-

i-tá : indic. **ἴ-ηντι**, *he moves*; **μαρνοίμην**, **μαρνοίμεθα** : indic. **μάρναται**, **δύναται** : indic. **δύναται**, cp. Skr. middle **śr-ni-tá** : indic. **śr-nā-ti**, *he breaks in pieces*.

§ 535. The Greek optative to the s-aorist was a new formation after the analogy of the thematic type, as in **λύσαιμι**, **λύσαις**, **λύσαι**; **λύσαιτον**, **λύσατην**; **λύσαιμεν**, **λύσαιτε**, **λύσαιεν**; middle **λύσαίμην** : **ἔ-λυσ-α**, **ἔ-λυσ-ά-μην**, where the **-α-** of the s-aorist indicative (§ 507) came to be regarded as a thematic vowel like the **-o-** in **φέροιμι**, **φέροι-μην**; and similarly **δείξαιμι**, **δείξαιμεν**, **δειξαίμην** : **ἔ-δειξ-α**, **ἔ-φηνα** from ***ἔ-φανσα**, &c.

The so-called Aeolic optative of the s-aorist which occurs in Homer and Attic was also a Greek new formation with reduplication of the s-element of the aorist and with **ε** from the original s-aorist of the subjunctive, as **δείξειας**, **δείξειε**, third pers. pl. **δείξειαν** from ***δεικσεσγαν**, and similarly in Lat. **dixerim**, **dixerimus** beside the regular old forms **dixim**, **diximus**.

§ 536. The optative to thematic indicative stems had originally **-i-** which combined with the thematic vowel **-o-** to form the diphthong **-oi-**, but **-oj-** before endings beginning with a vowel. This type of optative was preserved in Greek, Sanskrit and also in the old Germanic languages, but with the function of the subjunctive, whereas in Latin it disappeared already in the prehistoric period of the language. The original inflexion of this type of optative was :—

	Indg.	Gr.	Skr.	Goth.
Sing. 1.	*bhéroj- m	φέροιμι	bhárēyam	baíráu
	*bhéroi- s	φέροις	bhárēh	baíráis
	*bhéroi- t	φέροι	bhárēt	baírái
Dual 2.	*bhéroi- tom	φέροιτον	bhárētam	
	*bhéroi- tām	φέροίτην	bhárētām	
Plur. 1.	*bhéroi- m-	φέροιμεν	bhárēma	baíráima
	*bhéroi- te	φέροιτε	bhárēta	baíráip
	*bhéroi- nt	φέροιεν	bhárēyur	baíráina

The regular forms of the first pers. singular and the third pers. plural were not preserved in the historic period of any of the languages. Both forms would regularly have become *φέρω from older *φέροja. φέροιμι had the stem φέροι- from the other persons where it was regular and -μι after the analogy of the athematic presents, and similarly φέροι-εν with -εν from the optative of the athematic type (§ 531). And in like manner both forms would regularly have become *bháraya in Sanskrit, but the stem bhárēy- had -ē- from the other forms.

§ 537. In the -έω class of contract verbs the optative plural φιλέοιμεν, &c. regularly became contracted into φιλοίμεν, &c., and thus fell together with the athematic type διδοῖμεν. And then after the analogy of διδοῖμεν : διδοίην to φιλοίμεν a new singular φιλοίην was formed, and at a later period the -οίη- of the singular was levelled out into the dual and plural. After the analogy of the optative of this type were also formed new optatives to the contract verbs in -άω, -όω.

§ 538. The prim. Greek forms of the middle were *φεροιμᾶν, *φεροισθο, *φεροιτο (= Skr. bhárēta); *φεροισθον, *φεροισθᾶν; *φεροιμεθα, *φεροισθε, *φεροյατο (= Indg. *bhérojñto), on the personal endings see §§ 442-8. *φερογ-ατο would regularly have become *φερωτο. φέροιντο was a new formation with the stem φέροι- from the other forms and the ending -ντο from forms like ἐ-φέροντο. The old ending -ατο is found in Homer, Herodotus and the Attic dramatists in the combination -οι-ατο where -οι- was from the other forms.

THE IMPERATIVE.

§ 539. Already in the parent Indg. language the imperative system was made up of several distinct formations which included (a) injunctive forms, as φέρετε, Skr. bhárata; (b) forms with the bare stem, as φέρε, Skr. bhára, ēξ-ει, Lat.

ex-i; and (c) compound forms, as *īσ-θι*, *īσ-τω* = Skr. *vid-dhí*, *vit-tád*. It had injunctive forms for the second person singular of the middle, the second person plural of the active and middle, and the second and third person dual of the active and middle, as *ēπεο* = Lat. *sequere*; *φέρετε*, *φέρεσθε*; *φέρετον*, *φερέτων* for older **φερέτān* after the analogy of *φερέτω*, *φέρεσθον*, *φερέσθων*, see § 524. To these were added in prim. Greek the injunctive forms of the second aorist active, as *εἴσ-φρες*, *ἔκ-φρες*, *ἐνί-σπες*, *σχές*, *θές*, *δός*, *ἔς*, &c. (§ 524). The active forms of the injunctive require no further comment and will therefore be omitted in the following paragraphs.

I. The Active.

§ 540. The second person singular was expressed (a) by the bare stem, as *φέρε*, Skr. *bhára*, Goth. *baír*; *ἄγε*, Lat. *age*; *βάσκε*, Skr. *gáccha*; *τίμα*, *φίλει*, *δήλου*, from *τίμας*, *φίλες*, *δήλος*; *τέλει* from **τελεσjε*, *φαινε* from **φανjε*; aorists like *εἰπέ*, *ἔλθέ*, *εὑρέ*, *ἰδέ*, *λαβέ* beside *λίπε*, &c., where the former preserved the old accent when such imperatives were originally used at the beginning of the sentence, and the latter represented the original enclitic form (§ 38). *ἔξ-ει*, Lat. *ex-i*: *εἰ-σι*, *ἴστη* : *ἴστη-σι*, and similarly *δείκνυ*, *κρήμνη*, Lesb. *πῶ* beside *πᾶ-θι*. At a later period the -e in *φέρε*, &c. came to be regarded as an ending and was then extended to athematic verbs, as *καθ-ίστα* from **ίστας*, *τίθει* from **τίθεε*, and similarly *δίδου*, *κατά-βα*, *δύμνε*, &c.

(b) By the addition of the accented adverbial particle *-dhí* (= Skr. *-dhí*, later *-hí*) to athematic stems. This formation only occurs in Greek, Aryan and the Baltic-Slavonic languages, but the fact that the stem had the weak grade of ablaut shows that it was very old. Examples are *ī-θι*, Skr. *i-hí*: *εἰ-σι*, Skr. *ē-ti*; *īσ-θι* from **fīd-θi*, Skr. *vid-dhí*; *κλῦ-θι*, Skr. *śru-dhí*; *πῖ-θι* beside *πᾶ-θi*, Skr. *pā-hí*. Heavy

ablaut-bases, as *φά-θι* : *φη-σί*, *ἴλα-θι* from **σι-σλα-θι*, *όρνυ-θι*, perfects *ἔστα-θι*, *κέκλυ-θι*, *τέτλα-θι*, *τέθνα-θι*, Hom. *δείδι-θι* from **δεδῖ-θι*. Heavy bases with a long vowel (§ 458), as *γνῶ-θι*, *τλῆ-θι*, *φάνη-θι*. After the analogy of second aorists like *τλῆ-θι*, *φάνη-θι* it was added to the new first aorist passive (§ 514) with dissimilation of the θ after the preceding aspirate, as *λείφθη-τι*, *λύθη-τι*, &c. At a later period such imperatives were also formed from the strong grade stem of heavy ablaut-bases, as *ἴλη-θι* beside the regular form *ἴλα-θι*, *πῶ-θι* beside *πῖ-θι*, *στῆ-θι*, Hom. *δίδω-θι*, &c.

The ending *-ον* of the second person singular of the s-aorist *δεῖξ-ον*, *λῦσ-ον*, *φῆν-ον* : *ἐ-δειξα*, *ἐ-λῦσα*, *ἐ-φῆνα*, has never been satisfactorily explained.

NOTE.—Att. *πίει* (also extended to *πίεις* after the analogy of injunctive forms like *σχέσι*), *διδοι* (Pindar), and Dor. *ἄγει* probably contain the deictic particle *ἴ* which occurs in such forms as *οὐτοσ-ἴ*, *νῦν-ἴ* (§ 411).

§ 541. In Greek the third person singular was formed by the addition of *-τω* to the bare stem. This *-τω* (= Skr. *.tād*, Lat. *.tō*, Indg. **.tōd*) was not originally a personal ending, but simply the ablative singular of the neuter demonstrative pronoun **tod* (= Gr. *τό*, Skr. *tád*, Lat. *is-tud*, Engl. *that*) used adverbially with the meaning *from that time, after that, then*. The combination was originally used to express the second and third persons of all numbers, but already in prim. Greek it became restricted to the third person singular, and in Latin to the second and third person singular, whereas in Vedic it was almost exclusively restricted to the second person singular, but it also occurred occasionally for the third person singular, and the second person dual and plural. In Vedic it had the function of a kind of future imperative, expressing an injunction

which was to be carried out at a time subsequent to the present. Originally the *-tōd* had the principal accent and the stem of ablaut-bases had the weak grade of ablaut, as *īσ-τω* from **fiτ-τω*, Skr. *vit-tād*, *δό-τω*, Lat. *da-tō*, Skr. *dat-tād*, and similarly *διδότω*, *τιθέτω*, *ιστάτω*, *ἴτω*, *φάτω*, *δημύτω*, *δαμνάτω*, *δράτω*, *γνώτω*, &c.; perfects like *ἔστάτω*, *τεθνάτω*, *μεμάτω*, Lat. *mementō*. This formation was probably confined originally to athematic verbs, but it must have been extended to thematic verbs at a very early period as is shown by examples like *φερέτω*, *εἰπέτω*, Lat. *vehitō* beside Skr. *bharatād*, *vōcatād*, *vahatād*, *ἀγέτω* beside Lat. *agitō*.

§ 542. The third person plural. The restriction of the formation with *-tōd* to the third person singular in prim. Greek gave rise to several new formations for expressing the third person plural. The exact chronological order in which these new formations took place cannot be determined with certainty. The oldest type seems to be *φερόντω* which occurs in Doric, Boeotian and Arcadian. This type probably arose in prim. Greek by the addition of *-τω* to the injunctive form **φερον*, cp. the similar formation in Lat. *ferunt-ō*. From *φερόντω* was formed *φερόντων* by the addition of the secondary plural ending *-ν* of the third person. The type *φερόντων* occurs in Homer, Attic, Ionic and some Doric dialects, and was the only good one in Attic until Aristotle's time. The type *ἔστων*, *ἴτων*, &c., which occurs in Homer, Attic, and Ionic (on inscriptions), arose from the pluralizing of the singular by the addition of *-ν*, cp. the similar process in Latin *agitō-te* with *-te* after the analogy of *agi-te*. After the analogy of forms like *ἔδιδοσαν* : *ἔδιδον* was formed the type *φερόντωσαν* : *φερόντων*, which is found on Attic inscriptions of the fourth century B. C. And then lastly arose the type *φερέτωσαν*, *διδότωσαν* from a pluralizing of the singular by the addition of the plural ending *-σαν*. This type occurs in Attic prose

since the time of Thucydides and on Attic inscriptions from 300 B. C. onwards and also on inscriptions in the later Doric and North-Western dialects.

2. The Middle.

§ 543. For the second person singular of the present and second aorist the injunctive forms were used, as *ἔπεο*, *ἔπου* from **ἔπεσο* = Lat. *sequere*, and similarly *λείπου*, *λιποῦ*, *θοῦ*, *δοῦ*, &c. In forms like *τιθεσο*, *δίδοσο*, *ἴστασο*, *δείκνυσο* the -*s*- was restored after the analogy of the other forms, *τιθέσθω*, &c.

The second person singular of the s-aorist *δεῖξαι*, *λῦσαι*, *φῆναι* from **φανσαι*, &c. is difficult to account for, because this form does not occur in any of the other languages. Most scholars are inclined to regard it as being originally the active infinitive which came to be used for the imperative through the influence of the personal ending -(*σ*)*αι* (as in *φέρεαι*, *τιθεσαι*) of the second person singular of the present indicative, cp. also the Latin passive imperative plural *legi-minī* which in form corresponds to the infinitive *λεγέ-μεναι* (§ 546).

§ 544. The other forms of the middle contain the element -*σθ-* which is of the same origin as in the infinitive *φέρεσθαι*, *τιθεσθαι*, &c., but in other respects they have the same endings as the active. In prim. Greek the form *φερέσθω* arose beside the active form *φερέτω* after the analogy of *φέρεσθε* : *φέρετε*. The history and development of the middle forms of the third person plural went parallel with those of the active, but with regular loss of the -*v-* in the combination -*νσθ-* (§ 153), cp. *φερέσθων*, *τιθέσθων* beside the active *φερόντων*, *τιθέντων*.

THE INFINITIVE.

§ 545. The infinitives of the Indg. languages were originally isolated singular case-forms of *nomina actionis*, and as with other kinds of nouns the case-form used depended upon the construction of the sentence. Such isolated forms became associated with the verb as soon as they were no longer regarded as being connected with the declension of the type to which they originally belonged. This isolation took place with some *nomina actionis* already in the parent Indg. language. The original Indg. *nomina actionis* were best preserved in the Aryan, Old Germanic and Baltic-Slavonic languages, whereas in Greek and Latin they became in a great measure associated with the verbal system. The infinitive being a noun in form had originally nothing to do with the distinction between active, passive, and middle. The association of particular forms to particular voices took place at a much later period.

As there were in the parent Indg. language a large number of suffixes which were used to form *nomina actionis*, there are accordingly a large number of different forms of the infinitive in the separate languages, cp. Lat. *regere* from **reges-i*; Goth. OE. *nim-an*, *to take*; Lith. *dū-ti*, O.Slav. *da-ti*, *to give*; Vedic *yúdh-am*, *to fight*, *át-tum*, *to eat*, *yujé*, *to yoke*, *dá-man-ē* (Hom. *δό-μεν-αί*), *dá-ván-ē*, *to give*, *át-tav-ē*, *to eat*, *sak-śáni*, *to abide*. Of all these and various other Vedic forms only the one in *-tum*—identical with the Latin supine in *-tum*—was preserved in classical Sanskrit. In Vedic the case-form of the infinitive could be the accusative, dative, locative, and ablative-genitive. In classical Sanskrit and the Old Germanic languages the case-form was restricted to the accusative, in Latin to the dative, locative and accusative

(= the supine in *-tum*), and in Greek to the dative and locative. Datives were the infinitives in *-μεναι*, *-ναι*, *-έναι*, *-σαι*, *-σθαι*, and locatives those in *-μεν*, *-ειν*, &c.

I. Datives.

§ 546. *-μεναι* is the dative ending of a *-μεν*-stem (§ 345). This form only occurs in Homer and the Lesbian dialect and was originally confined to athematic verbs, as Hom. *δόμεναι*, Ved. *dámanē*, *īd̄m̄enai*, Ved. *vidmánē*, and similarly *γνώμεναι*, *ζόμεναι*, *ζευγνύμεναι*, *θέμεναι*, *έστάμεναι*, *τετλάμεναι*; and then later extended to thematic verbs, as Hom. *ἀειδέμεναι*, *ἀξέμεναι*, *εἰπέμεναι*; *λεγέμεναι* which corresponds in form to the Latin second person plural of the passive imperative (*legimini*).

The dative ending *-ναι* in Attic, Ionic, Arcadian and Cyprian probably arose from older *-μναι* where *-μν-* was the weak grade form of *-μεν-* (§ 278) and which became simplified to *-ν-* after long vowels (§ 148), as *ἀῆ-ναι*, *γνῶ-ναι*, *δῦ-ναι*, *στῆ-ναι*, beside *ἀή-μεναι*, *γνώ-μεναι*, *δύ-μεναι*, *στή-μεναι*. The *-ναι* then came to be used after short vowels and supplanted the old locative ending in *-μεν* (§ 549), as *δεικνύναι*, *διδόναι*, *ιστάναι*, *φάναι*, *τιθέναι*, *τεθνάναι*.

After the analogy of *-μεναι* (*δόμεναι*, &c.) : *-έ-μεναι* (*λεγέμεναι*, &c.) to *-ναι* a new ending *-έναι* was formed which became productive especially in the perfect infinitive, as *εἰδέναι*, *δειδίναι*, *δλωλέναι*, *γεγραφέναι*, *λελοιπέναι*, *γεγονέναι*, &c. In Cypr. *δοfεναι*, Att. *δοῦναι* it is doubtful whether the *f* belongs to the stem or to the suffix, cp. also Ved. *dāvánē*.

§ 547. The infinitive of the s-aorist *δεῖξαι*, *λῦσαι*, *φῆναι*, &c. is an old dative of an s-stem which became associated with the verbal system after the analogy of *ξδειξα* and the participle *δείξας*. It corresponds in form to Vedic infinitives like *jiš-é*, *to conquer*, *stuš-é*, *to praise*, and to the Latin

passive infinitive *dari* from *das-ai, cp. also *τιμῆσαι*, *φιλῆσαι* beside Lat. *amāri*, *habēri*.

§ 548. The ending of the middle infinitive in -σ-θαι is probably related to the Vedic infinitives in -dhyāi, -dhyē, as in *dhiyá-dhyāi*, *to deposit*, *gamá-dhyē*, *to go*, beside which there was originally a form in -dhē corresponding to Greek -θαι. The origin of the formation of this type of infinitive is uncertain. The most commonly accepted theory is that it was a compound consisting of an es-stem, as in *εἰδεσ-* : *εἶδος* (§§ 279, 384), and the dative of a root-noun *dhē, *dh- : *τι-θη-μι*, and that from forms like *εἰδέσθαι* : *εἴδε-ται* the -σ-θαι came to be regarded as the ending and was then extended to all kinds of tense-stems, as *λύσεσθαι*, *λύσεσθαι*, *λύσασθαι*, *λελύνθαι*, and similarly *δίδοσθαι*, *τίθεσθαι*, *ἴστασθαι*, *δείκνυσθαι*, *ἥσθαι*, *δόσθαι*, *θέσθαι*, *λιπέσθαι*, *πεπύσθαι*, &c. *δέχθαι*, *γεγράφθαι* from *δεκοσθαι, *γεγραπτοσθαι (§ 221), and similarly *πεπλέχθαι*, *λελεῖφθαι*, *τετράφθαι*, *ἐστάλθαι*, *πεφάνθαι*, &c. This type of infinitive became medio-passive in meaning through the influence of the middle personal endings -σθε, -σθον, &c.

2. Locatives.

§ 549. The ending -μεν, which occurs in Homer and in the Aeolic, Doric, Thessalian, Boeotian, Elean, Arcadian and the North-Western group of dialects, is an endingless locative of a -μεν-stem (§§ 273, 345), as in *ἴδμεν*, *τιθέμεν*, *θέμεν*, *δόμεν*, *όρνύμεν*, *έστάμεν*, &c. Cretan infinitives like *δόμην*, *ἡμην* had -ην after the analogy of *φέρην* = *φέρειν*; and similarly *δόμειν*, *θέμειν* in the dialect of Rhodes were formed after the analogy of *φέρειν*.

§ 550. It is difficult to account satisfactorily for the formation of the infinitive in -ειν. The difference between the ending -ειν in Attic, Ionic, &c. and the -ην in Doric, Lesbian and Elean shows that the -ειν, -ην is the result of contraction. This contraction probably arose from -εσεν

and represented an old endingless locative, but as this exact type of infinitive ending does not occur in the other languages, it is uncertain whether the *-εσεν* represents an original formation *-e-sen-* or *-es-i*. In the former case it would correspond to the Vedic forms in *-san-i*, as *nē-śān-i*, *to lead*, *sak-śān-i*, *to abide*; and in the latter to Vedic forms like *jēš-i*, *to conquer*, *stōš-i*, *to praise*, and to Lat. *dare* from **das-i*, which are locatives of *s*-stems. We should then have to assume that prim. Greek **φέρεσι* became **φέρεσεν* through the influence of the *-εν* in the ending *-μεν*.

The Doric and Arcadian ending *-εν* in *φέρεν*, *ἔχεν*, *τράφεν*, &c. was due to the analogy of the ending *-μεν*.

PARTICIPLES.

§ 551. All active participles except the perfect had originally the formative element *-ent-* with the various ablaut-grades *-ont-*, *-nt-*, *-nt̄-*. For the declension of these participles see §§ 352-5.

§ 552. The formative element of the masculine and neuter of the perfect active participle consisted of the blending of the two distinct elements *-wes-* with the ablaut-grades *-wos-*, *-wōs-*, *-us-*, and *-wet-*, *-wot-*. The relation in which the elements *-wes-*, *-wos-*, and *-wet-*, *-wot-* originally stood to each other is unknown. It is also uncertain which cases originally had the *-s*-form and which the *-t*-form. In Greek the *-wot-* became generalized in the oblique cases, whereas in Sanskrit it only occurred in the instrumental, dative and ablative dual and plural (*vidvádbhyām*, *vidvádbhiḥ*, *vidvádbhyah*), the locative plural (*vidvátsu*), and the nominative and accusative neuter singular (*vidvát*, *knowing*). This mode of forming the perfect active participle was preserved in Greek, Aryan and the Baltic-Slavonic languages, but in the other

languages only scanty fragments are found. For a similar blending of two distinct formative elements see § 371.

In the masculine nominative singular the *-wos-* was regularly lengthened to *-wōs* (§ 368), cp. *εἰδώς* beside *εἰδότα*, *εἰδότος*, &c., neut. *εἰδός*. In forms like Hom. *τεθνητά*, *μεμαῶτες*, *πεφυῶτας* the *-o-* of the nominative singular was levelled out into the oblique cases. The stem-syllable had originally the weak grade of ablaut, but in Greek it generally had either the strong grade vowel of the present indicative or the stem-syllable was formed direct from the perfect indicative, cp. *εἰδός* beside Skr. *vidvát*, *λέλοιπ-ός* : *λέλοιπ-α* beside Skr. *ri-rik-vás-* : *ri-rēc-a*; and similarly *είώς*, *έστηώς*; *γεγονώς*, *δεδορκώς*, *πεπονθώς*, *τετοκώς*, *λελυκώς*, *ἐδ-ηδώς*, *ἔρρωγώς*, *ἐληλουιθώς* beside *ἐληλυθώς*; and in all *κ*-perfects, as *έστηκώς*, *τετημηκώς*, &c. The weak grade of ablaut occurs in *έσταώς* : *έσταμεν*, *βεβαώς* : *βέβαμεν*, *γεγαώς* : *γέγαμεν*, *μεμαώς* : *μέμαμεν*.

The feminine of the perfect active participle had also originally the weak grade of ablaut in the stem-syllable, as in *ἰδ-νῖα* = Skr. *vid-úṣī*, *λελακνīā*, *πεπαθνīā* : *λεληκώς*, *πεπονθώς*, Hom. *ἀραρνīā*, *τεθαλνīā* : *ἀρηρώς*, *τεθηλώς*. Forms like *εἰδνīā*, *λελοιπνīā*, *γεγονεīā* were new formations from the stem-form of the masculine. Both in Greek and Sanskrit it belonged to the *jā*-declension (§ 322). The original sing. nom. was *-wes-jə*, gen. *-us-jās* which in Greek would regularly have become *-eīa*, gen. *-uīās*. Leveling then took place in both directions whereby partly *-eīa* and partly *-uīās* became generalized, as *γεγονεīā*, &c. beside *ἰδνīā*, &c.

§ 553. The formative element *-μενο-* was used in forming all Greek middle participles, as *λειπόμενος*, *λιπόμενος*, *λειψόμενος*, *λειψάμενος*, *λειφθησόμενος*, *λελειμένος*, *λελεψόμενος*; *ἴσταμενος*, *τιθέμενος*, *διδόμενος*, *δεικνύμενος*, *θέμενος*, *δόμενος*, &c. The formative element originally

had the three grades of ablaut *-meno-*, *-mono-*, *-mno-* (cp. § 240). The first became generalized in Greek, and probably also in Latin in the second person plural of the passive (*legimini* = *λεγόμενοι*), the second in Sanskrit thematic verbs, as *bōdha-māna-h* = *πενθό-μενος*, and the third occurs in isolated forms like Latin *alumnus*, *autumnus*.

§ 554. The passive participle in *-θeis*, as in *λυθεις*, &c. (cp. § 514) was a special Greek new formation formed after the analogy of participles like *φανεις*.

VERBAL ADJECTIVES.

§ 555. The verbal adjectives in *-tō-* originally denoted completed action, but they were not passive in function. They preserved their original function and meaning in Greek, but in the Sanskrit, Latin, Old Germanic and Baltic-Slavonic languages they generally came to be used as perfect or past participles, mostly with a passive meaning, especially when related to transitive verbs. The accent in Greek and Sanskrit shows that the stem-syllable originally had the weak grade of ablaut, cp. *κλυτός*, Skr. *śrutáḥ*, Lat. *in-clutus*; *στατός*, Skr. *sthitáḥ*, Lat. *status*, *δοτός*, Lat. *datus*; and similarly *κριτός*, *λυτός*, *χυτός*, *σχετός*, *τακτός*, *φαντός*, &c. beside new formations like *λειπτός*, *στρεπτός*, *τρεπτός* formed from the stem of the present. See § 258.

§ 556. The verbal adjectives in *-téos* from older **-téfos*, as in *δοτέος*, *dandus*, *γραπτέος*, *scribendus*, *σταλτέος*, *εύρετέος*, *λυτέος*, *λειπτέος*, *πειστέος*, *τιμητέος*, &c. (§ 255) were a special Greek formation which has no parallel in the other languages.

CHAPTER XIII

ADVERBS

§ 557. Greek adverbs are for the most part twofold origin. They are partly isolated case-forms of pronouns, nouns, substantivized adjectives, and occasionally predicative adjectives used adverbially, and partly formed by means of suffixes the origin of which is often unknown. It is probable that some at least of these suffixes were the remnants of case-endings which became isolated from the inflexional system already in the parent Indg. language and were then crystallized as adverbial suffixes.

I. CASE-FORMS.

§ 558. The nominative occurs in ἀναμίξ, ἀλλάξ, ἄλις, λέχρις, μόλις, χωρίς, ἐγγύς, εὐθύς, &c., cp. also Skr. *parāḥ*, *far off*, Lat. *prorsus*, *satis*.

§ 559. The accusative was often used adverbially in all the Indg. languages, as *αὔριον*, *δηρόν*, *μόνον*, *νέον*, *σήμερον*, Att. *τήμερον*, *πλησίον*, *πρώτον*, *χθιζόν*, cp. Skr. *kāmam*, *at pleasure, willingly*, Lat. *domum*, *rūs*, *multum*, OE. *ealne weg*, *always*. *ἀκμήν*, *ἀρχήν*, *δήν*, Dor. *δάν* from *δῆān, *δωρεᾶν*, *μακράν*, *πρόφην*, *σχεδίην*, *ταχίστην*. *πρόφασιν*, *χάριν*, cp. Skr. *kím*, *why?*, Lat. *furtim*, *partim*, *facile*. *εὐθύ*, *πολύ* = Skr. *purú*, Goth. *filu*. Att. *τῆτες*, Ion. *σῆτες*, *χθές* = Skr. *hyáḥ*. *προῦκα*, *ὄναρ*, *μέγα*, &c., cp. Skr. *náma*, *by name*. *ἄλλά*, *πολλά*, *πρόκα*, *πρώτα*, *μάλιστα*, *τάχιστα*, &c. Here belong also the adverbs in *-δον*, *-δην*, *-δα* (neut. pl.), the *-δ-* of which was probably the same as in verbal abstract nouns like *χρόμαδος*, and Skr. *samád-*, *fight, battle*. Examples are: *ἀγεληδόν*, *ἀμφαδόν*, *ἀνασταδόν*, *ἀναφανδόν*, *βοτρῦδόν*, *μουναδόν*, *φυδόν*, *σχεδόν*, *ῳρῦδόν*;

ἀνέδην, βάδην, βλήδην, κλήδην, κρύβδην, λίγδην, σποράδην, στάδην, συλλήβδην, χύδην; ἀγεληδά, ἀναφανδά, ἀποσταδά, κρύβδα, μίγδα, φύγδα, χανδά, &c.

§ 560. The genitive occurs in adverbs of time and place, as ἐσπέρᾶς, ἡμέρᾶς, ἔνης, Dor. ἔνᾶς, νυκτός = Goth. *nahts*, O.E. *nihtes*. ἀγχοῦ, τηλοῦ, πανταχοῦ, ὑψοῦ, ἐπιπολῆς; αὐτοῦ, ὁμοῦ, ποῦ, πού, δπού.

§ 561. The adverbial use of the dative was rare, as in χαμάι, Lat. *humī*, καταί, παραί. The dative supplanted the original instrumental in forms like Attic, Ionic ἀνάγκη, δίκη, ἰδία, κουῆ, σπουδῆ, κύκλω; ἀλλη, ταύτη, ἦ, πῆ, τῆ-δε, Cret. ἀλλᾳ, δπᾳ. As the dative and locative regularly fell together in the **ā**-declension it is possible that some of the above forms may be originally locative (§ 305).

§ 562. The locative was common both in nominal and pronominal forms, as οἴκοι, οἴκει, cp. Lat. *domī*, *belli*, Ἰσθμοῖ, Πῆθοῖ, πανταχοῖ, ἀθεεί, πανδημεί, cp. Skr. ākē, *near at hand, duré, at a distance*; οἶ, ποῖ, Dor. αὐτεῖ, ὅπει, πεῖ, τεῖ-δε, τηνεῖ, τουτεῖ, Att. ἐκεῖ, Cret. διπλεῖ, Θηβαι-γενής, Elean Ὀλυμπίαι; Αθήνησι, Πλαταιάσι, θύρασι, ὄρασι. αἰεί from *αἰϝεστι, ἥρι from *ἄյερι, Μαραθῶνι, Dor. πέρυτι, Att. πέρυσι = Skr. *parut*; endingless locatives were αἰέν, Dor. αἰές, νύκτωρ, cp. the similar -r in Lith. *kuř*, *where*, Lat. *cūr*, *why*, Goth. *hvar*, *where*, Lat. *noctur-nus*.

§ 563. The ablative (= Indg. -ōd, -ēd) was mostly preserved in pronominal forms, as οὕτω, Dor. ὥ, δπω, πῶ, *unde*, τῶ-δε, τουτῶ, *hinc*, τηνῶ, *istinc*, Locr. ὥ, δπω, *unde*, cp. Skr. tāt (= Indg. *tōd), *then, in this way, kásmāt, why, yát, in so far as*. Delph. *fóikw, domo*, cp. O.Lat. *meritōd, rectēd*, Goth. *sinteinō, continually, þiubjō, secretly*.

§ 564. The instrumental occurs in both nominal and pronominal forms, as ἐπι-σχερώ, Dor. *κρυφᾶ*, Att. Ion. *κρυφῆ*, ἀμαρτῆ, Att. λάθρᾶ, Ion. λάθρη. οὕ-πω, πῶ-ποτε, cp. Lat. *quōd, τῶ-δε*, Ion. ὥ-δε, Lesb. ἀλλᾶ, δππᾶ, Dor. ὥ-τε,

ταυτά, Att. *ταύτη*, ἦ, *ἴf*, *πῆ*, Cret. *δ·πῆ*, Lac. *πή·ποκα*, cp. Goth. *luē*, *wherewith*; Dor. *ἄχι*, Hom. *ἡχι*. Instrumental were also the adverbs in -ω like *ἄνω*, *ἐξω*, *κάτω*, *πρόσ(σ)ω*; *ἀνωτέρω*, *ἀνωτάτω*, *ἐκαστέρω*, *ἐκαστάτω*, *προτέρω*, &c. It probably also occurs in the adverbs in -α, as *ἄλψα*, *ἄμα*, *ἄρα*, *ἢκα*, *θαμά*, *κάρτα*, *λίγα*, *λίπα*, *μάλα*, *παρά*, *πεδά*, *πύκα*, *σάφα*, *σῆγα*, *τάχα*, *ῶκα*.

§ 565. The so-called positive of adverbs of quality is originally the ablative singular of the adjective used adverbially to which was added the particle -s (§ 575). The ending -ως belonged originally to o-stems only, as in *καλῶς*, *σοφῶς*, *φίλως*, *δικαλῶς*, &c. From these it became extended to all kinds of stems, as *ἥδεως*, *ἀληθῶς*, *πάντως*, *εὐδαιμόνως*, *χαρέντως*, &c.

In the comparison of adverbs it is necessary to distinguish between the adverbs derived from adjectives and those derived from adverbs. For the comparative of adverbs derived from adjectives the accusative neuter singular of the corresponding adjective was used, as *σοφώτερον*, *ἥδιον*, and similarly in Sanskrit and Latin. And for the superlative the accusative neuter plural was used, as *σοφώτατα*, *ἥδιστα*, and similarly in Sanskrit, whereas in Latin we have the ablative singular of the corresponding adjective, as O.Lat. (inscription) *facilu-med* = *facillumēd*, later *facillimē*.

The comparative and superlative of adverbs derived from adverbs had the instrumental ending -ω just as in the so-called positives, as *ἄνω*, *ἀνωτέρω*, *ἀνωτάτω*; *κάτω*, *κατωτέρω*, *κατωτάτω*.

2. SUFFIXES.

§ 566. -θι (= Indg. *-dhi, cp. Skr. *á-dhi*, *above*, *upwards*, and the -b- in Lat. *ubi*, *ibi*) denoting *where*, as in *Κορινθόθι*, *οίκοθι*, *οὔρανόθι*; *ἄλλοθι*, *αὐτόθι*, *κεῖθι*, *δθι*, *πόθι*, *τόθι*; *ἔκτοθι*, *ἔνδοθι*.

§ 567. *-θα* beside *-θε(ν)* denoting *place*. The relation in which these suffixes stand to each other is unknown, but they are doubtless related to the *-ha* in Skr. *i-há*, *here*, *kú-ha*, *where*. Examples are: ἔν-θα, ἐνταῦθα, ὑπαι-θα, Dor. Lesb. ἔνερ-θα, πρόσ-θα beside Hom. ἔνερ-θε(ν), πρόσ-θε(ν), ὅπι-θε(ν), ὅπισ-θε(ν), ὑπερ-θε(ν).

§ 568. *-θεν* denoting *whence*, as ἀκρο-θεν, Διό-θεν, ἡῶ-θεν, ἵππο-θεν, κλισή-θεν, οὐρανό-θεν; ἄλλο-θεν, ἀμφοτέρω-θεν, αὐτό-θεν, ὅθεν, πάντο-θεν, πό-θεν, Dor. τουτῶ-θεν; ἐκεῖ-θεν, ἔν-θεν, ἔξω-θεν, ὑψό-θεν.

§ 569. *-δε* denoting *whither* is originally a preposition and is related to Lat. *dē*, O.Slav. *do*, O.E. *tō*, to, Indg. **dě*, **dō*, as ἄγρα-δε, ἄλα-δε, Μέγαρα-δε, οἴκα-δε (acc. neut. pl.) beside Hom. οἶκόν-δε, πόλεμόν-δε, φύγα-δε, Ἀθήναξε from *Ἀθāναν-δε (§ 153), and similarly θύραξε.

§ 570. *-σε* with the same meaning as *-δε*, as κυκλό-σε, πάντο-σε, τηλό-σε; ἄλλο-σε, ἀμφοτέρω-σε, αὐτό-σε, κεῖ-σε, ὁμό-σε, πό-σε. The *-σε* may be the same as Goth. *-þ*, cp. ἄλλο-σε, πό-σε beside Goth. *aljaþ*, *elsewhere*, *hraþ*, *whither*, but it is difficult to see why the **-τε* became *-σε* in adverbs of place whilst it remained in adverbs of time.

§ 571. *-τε* denoting *time*, as ἄλλο-τε, αῦτε, ὅτε, πάντο-τε, πό-τε, τό-τε. Lesbian has *-τα*, as ἄλλο-τα, ὅ-τα, πό-τα, cp. also Att. *el-τα*, ἔπ-ειτα.

§ 572. *-τος* (= Skr. *-tah*, Lat. *-tus*), as ἐκ-τός, ἐν-τός, cp. Skr. *i-táh*, *from here*, *tá-tah*, *from there*, Lat. *in-tus*, *caeli-tus*, *fundi-tus*.

§ 573. *-κα* the origin of which is unknown, as in αὐτί-κα, ἥνι-κα, τηνί-κα, Dor. ὅ-κα, ἄλλο-κα, πό-κα, τό-κα.

§ 574. *-κας* in ἔ-κας from **σφε-κας*, ἀνδρα-κάς is probably the same suffix as in Skr. *dēva-śáḥ* (= Indg. **-kṣ*), *god for god*.

§ 575. Quite a number of adverbs have forms with and without a suffixal *-s*, as ἀμφί-*s*, οὔτω-*s*, πέρυτι-*s* beside ἀμφί, οὔτω, πέρυτι (*πέρυσι*), Delph. *οἶ-s* beside the usual form *οἶ*,

Elean ἀνευς for ἀνεν, Hom. ἀτρέμας beside ἀτρέμα, &c. The -s became generalized in adverbs of quality formed from adjectives already in the prehistoric period of the language. The origin of this -s is uncertain. It probably arose from various sources, such as the adverbial forms where the -s was originally a case- or stem-ending, as nom. ἀλις; gen. νυκτός; acc. neut. sing. χθές, and the -s in multiplicative numerals, as δίς, Skr. bhīḥ, Lat. bis. See Brugmann, *Grundriss*, &c., vol. ii, second ed., p. 737.

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CORRIGENDA.

§ 44 note I for σκίδνημι	read	σκίδναμαι.
73 „ δύμόδλα	„	δύμόκλᾶ.
96 „ ἐσπέσθαι	„	ἐσπέσθαι.
97 „ κέρασαι	„	κεράσαι.
118, 127 „ ὑμέis	„	ὑμεῖς.
129 „ δῆλεσθαι	„	δῆλέσθαι.
153 „ φερόσθων, *-ονσθων	„	φερέσθων, *-ενσθων.
237 „ χρύσειος, χρύσεος	„	χρύσειος, χρύσεος.
287 „ ἄριστον	„	ἄριστον.
289 „ ναυκράτης	„	ναυκρατής.
„ λαθικήδης	„	λαθικήδης.
402 „ ζημεθεν	„	ζέμεθεν.
„ δῆμε	„	δῆμε.
431 „ δύμιλουν : δύμιλέω	„	δύμιλουν : δύμιλέω.
466 (last two lines) for were also formed read was also formed, and delete πιμπράνω.		
501 for ἔστηκα read ἔστηκα.		
512 „ ἐγγράσα „, ἐγγρᾶσα.		
517 „ κεχύμαι „, κεχύματ		